MARCH 1957
VOLUME 87 NO. 6

PRINTING EQUIPMENT *Engineer*

THE INDUSTRY-WIDE TECHNICAL PUBLICATION

Published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in the commercial, magazine, private plant and daily newspaper fields, covering major processes.

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MacD. Sinclair, Editor **Don Will, Publisher**

Edward H. Owen, Associate Editor
Adam Henri Reiser, Eastern Editor
Mrs. Virginia Silverman, Asst. to Editor
Mrs. Anne Forsman Rackel, Advertising Production

Paul B. Holder, Advertising and Promotion, 1276 West Third St., Cleveland 13, O. Phone: PRospect 1-0088.
William L. Osborn, Eastern Advertising Representative, 2709 Grand Central Terminal, New York 17, N. Y. Phone: MUrray Hill 6-5980.
Melburn O. Simmons, Mid-West Advertising Representative, 333 North Michigan Ave., Chicago 11, Ill. Phone: DEarborn 2-6467

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Member Publications BPA Business Audit

Accepted as Controlled Circulation Publication at Cleveland, Ohio.

OUR COVER: Because the theme of this issue is Plant Planning and Improvement we have chosen Thomas P. Henry, president of a Detroit typesetting company which bears his name, as representative of the many printer-planners who have toiled with engineers and architects in planning and/or improving printing plants. Although a variety of devices are used by these executives, Henry made effective use of cardboard templates in arranging equipment in his new $500 thousand plant. The cylinder-like objects in the picture are simply weights for holding the templates to the floor plan. The story of Henry's plant appears as part of this month's section on new plants which begins on Page 49.

A word from WASHINGTON POST *and* TIMES-HERALD

"This installation is the most amazing piece of equipment I have seen in my 34 years in the newspaper business. On every press with an installation of the Hurletron Control System, our registration has been perfect. We have pulled papers out of the folder before, during and after the paster cycle and found the color in perfect registration." *Harry Eybers, Production Manager, Washington Post and Times-Herald*

HURLETRON AUTOMATIC REGISTER CONTROL FOR ROP COLOR

Mr. Eybers further says, "We have not had any trouble with this equipment since it was installed nor has it been any mystery to our maintenance electricians.

"In normal practice the pressman starts the press on manual operation using the compensator pushbuttons on the master control panel for initial registering-in. After satisfactory register has been acquired manually, the pressman then notes the illuminated bulls-eyes on the control panel and depresses the corresponding selector switch pushbutton which rotates the selector switch until the lights on the master control panel go out. A "no light" condition indicates the selector switch is now in perfect register with the mark. If acceptable papers are then being produced at the folder, the automatic switch is turned on and the Hurletron will continue to control automatically. It's as simple as that."

A Hurletron engineer will be glad to show you how you can have automatic color register on your presses. Write us . . . there's no obligation.

ASK FOR YOUR COPY

This interesting illustrated booklet contains full details about Hurletron Automatic Register Controls for ROP Color. Write for it today.

ELECTRIC EYE EQUIPMENT COMPANY

1930 EAST FAIRCHILD STREET, DANVILLE, ILLINOIS

Manufacturers of: Hurletron R.O.P. Color Registration Controls; Automatic Controls of Caliper and Weight on Paper and Board; Center Line and Side Web Guide Controls; Cut-Off and Back-Up Controls; Slitter Controls, Moisture Controls.

For More Information Circle 47 on Reader Service Card

Ludlow Tempo Black Italic

Here is a powerful new addition to the growing Ludlow Tempo typeface family that will supplement the popular Tempo Black series. Tempo Black Italic will work well with other Tempo faces. It is timed to the present trend toward the use of strong italic display lines.

Ludlow Tempo Black Italic is particularly well adapted to department store advertising. It produces effective display that demands attention. Fonts are now available for shipment in 14, 18, 24, 30, 36, 42, 48, 60 and 72 point.

Send for your free specimen page showings today. There is no obligation.

Ludlow Typograph Company 2032 Clybourn Avenue, Chicago 14, Ill.

Set in members of the Ludlow Tempo family

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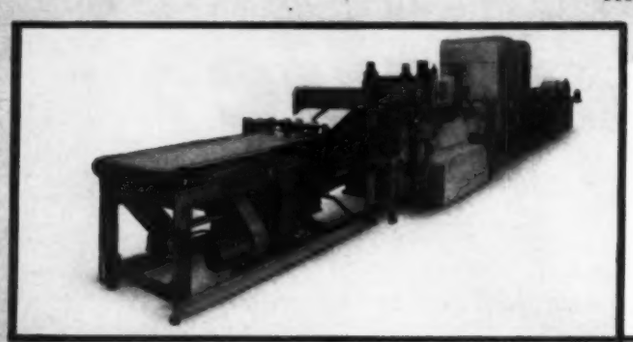
Hallmark of the finest printing and converting equipment...

Champlain

Rotogravure

High-speed precision-register printing on practically *any* stock in *any* practical multiple of colors. Meet the ever-increasing demand for more and better wrappers, labels, and cartons for packaged goods with Champlain *inline* rotogravure. "Speedry" ink fountain insures true reproduction of color and instantaneous drying. Print from roll stock 8" to 44" wide.

To complete a* CHAMPLAIN *rotogravure press—a* CHAMPLAIN *inline precision delivery unit:

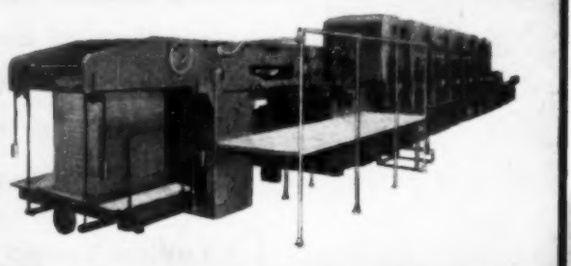


Cutting and Creasing Press

In one pass – only *once* through the press – it cuts, creases, and automatically yet thoroughly strips 7,500 to 10,500 cartons per hour from a continuous web. Platen press quality at *better* than cylinder press speeds.

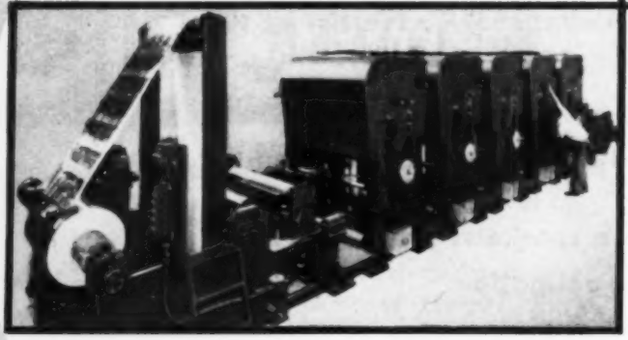
Sheet Delivery

Delivers from 8,500 to 12,500 square cut sheets per hour with 1/64" accuracy. ***Faster than any other standard sheeter.*** Positive sheet handling eliminates damage. No waste trim.



Rewind Press

Hydraulically-actuated constant-tension roll unit rewinds from 400 to 800 ft. per min. Positively synchronized to press for balanced speed, tension, and control. Single, multiple, and staggered-roll models.



PLUS

– a complete line of other equipment for all printing and converting needs.

LETTERPRESS PRESSES, FLEXOGRAPHIC PRESSES, SPECIALTY PRESSES—for Tag, Chart Paper, End and Bakery Seals, Die Cut Labels.

CUTTING AND CREASING EQUIPMENT—Roll Fed Swing-Type Reciprocal and Stationary Die Cutting Presses – Vertical Extruding and Eccentric Punches and Perforators—Rotary Blankers.

SPECIALTY CONVERTING EQUIPMENT FOR INLINE USE—Rotary Embossers – Perforators and Score Units – Slitting Equipment – Hot Melt Thermoplastic Applicators – Special Delivery Equipment.

AUXILIARY EQUIPMENT – Automatic Electronic Register Controls (for multicolor and fabrication register on roll-fed equipment) – Automatic Web Splicers.

... and for special engineered equipment:

Champlain's ability to design and build special units is based on years of experience in developing inline printing, fabricating, and delivery equipment.

Champlain

Write today for catalog of Champlain equipment. Champlain Company, Inc.
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Name and Title_____

Company Name_____

Company Address_____

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MARCH '57

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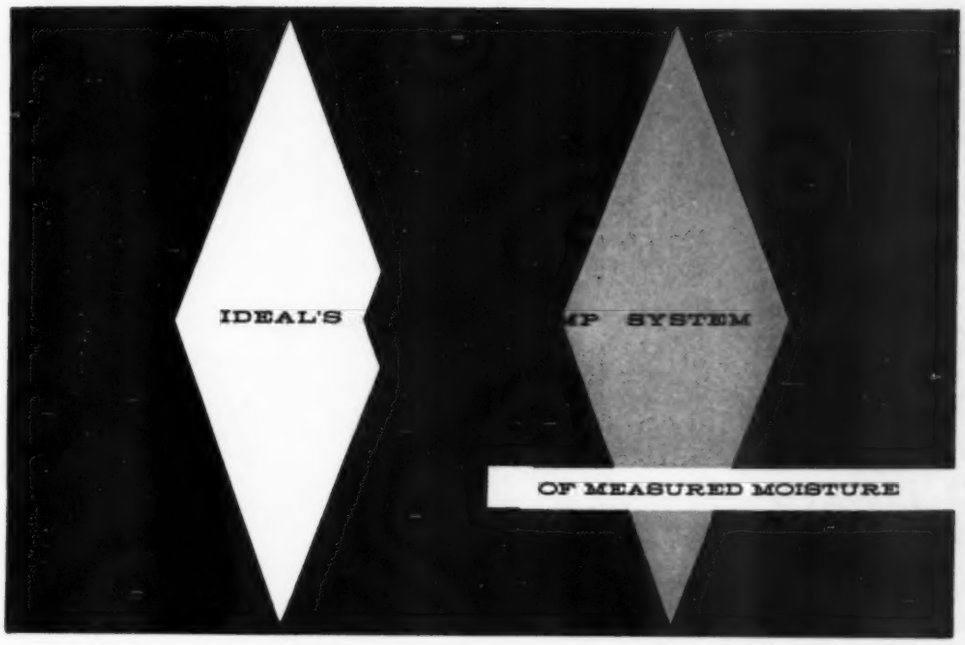
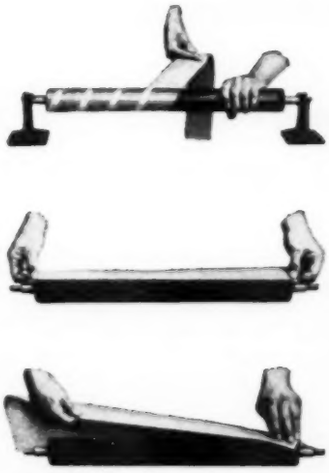
USE THE CAR

IT'S EFFICIENT, FAST AND EASY





Litho plate moisture can now be controlled!

Simple as A, B, C

With Ideal's new disposable, lintless dampening cover used over Ideal's Plast-O-Damp water form brass roller, you can now control plate moisture throughout the entire press run.

The big advantages of this new and revolutionary dampening system are

No dampener covers
No resetting of dampeners
Faster ink and water balance in starting
No dampener lint

measured moisture

Just roll the Plast-O-Damp covers on when you wish to change. Save money and time with this new system of measured moisture!

Write for descriptive folder.

4 FACTORIES

IDEAL ROLLER & MANUFACTURING CO.
CHICAGO 8, ILLINOIS — LONG ISLAND CITY 1, N. Y.
HUNTINGTON PARK, CALIF. — CHAMBLEE, GEORGIA

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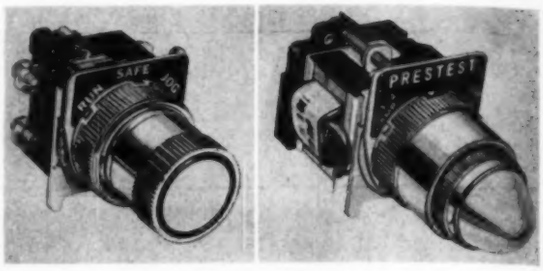
Equipment & Supplies

If you wish additional information concerning equipment, supplies, and/or technical literature, please make your request to *Printing Equipment Engineer*, 1276 West Third St., Cleveland 13, Ohio.

Adds to Oil Tight Pushbutton-Indicating Light Line—Two additions to its line of oil-tight pushbuttons have been announced by Cutler-Hammer, Inc. In the Roto-Push operator unit are combined the functions of a single button station with the advantages of a two or three position selector switch in one unit. Contacts are maintained or momentarily operated by either turning the guard ring, depressing the button, or a combination of both.



The Pres-Test indicating light is a means of checking indicating lights without disturbing the control circuit and without removing a lens or bulb.

The back-of-panel depth of this entire line of oil-tight pushbuttons 1 23/32 in. for the transformer types and 1⅞ in. for the resistor units. They are available in key-operated, selector switch, flush button, mushroom head or knob-operated models, in each of which is utilized a Neoprene diaphragm seal for oiltightness. For further information, please circle No. 263 on the Reply Postcard.

Old Gothic Bold Italic Typeface

The release of Old Gothic Bold Italic, a classical grotesque typeface in the contemporary idiom, produced in the Netherlands by Typefoundry Amsterdam, has been announced by Amsterdam Continental Types and

OLD GOTHIC BOLD ITALIC 10 — 72 point

Graphic Equipment, Inc. Available in 10, 12, 14, 18, 24, 36, 48, 60 and 72 pt. sizes, the face is sans serif with expanded letters. Old Gothic Bold Italic is manufactured in capital and lower case letters, with strokes of varied thickness. For further information, please circle No. 268 on the Reply Postcard.

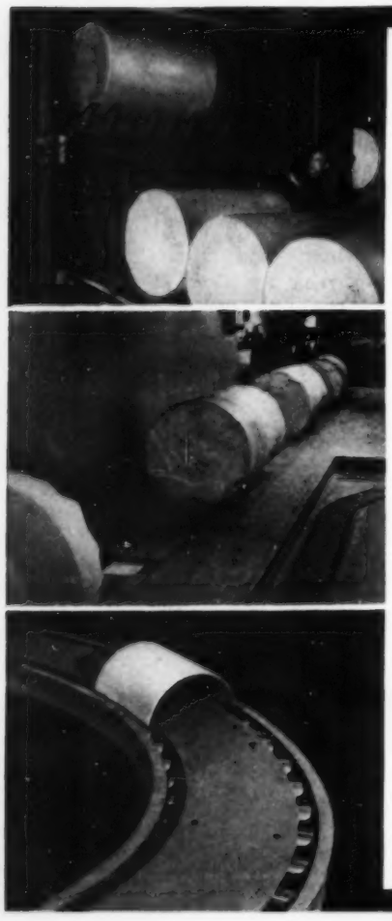
Pencil Magnifier

A novel magnifier has been announced by Mark Specialty Co. It consists of a 15/16 in. visible lens (exclusive of frame which is attached to regular pencils. It was developed for use by photoengravers and offset platemakers. It may also be used on stencil knives for silk screen work and on artist's makeready knives. The magnifier is attached to a pencil by spring clip and may be slid up or down the pencil as desired. The lens frame is hinged to the spring clip to permit closing in the lens against the pencil when the pencil is carried in a pocket. For further information, please circle No. 253 on the Reply Postcard.

Improved Offset Blanket

An improved offset printing blanket with a reinforced permanent base, has been developed by the Dayton Rubber Co. Using a new rubber compound, company states the three-

(*Continued on Page* 20)



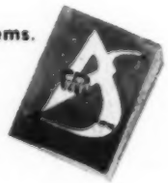
Prime mover for NEWSPRINT ROLLS OR STEREOPLATES

Up...down...or horizontal—whatever your conveying problem, there's a Gifford-Wood unit or system *already in use* that comes close to meeting your problem.

For years G-W has solved big specialized handling jobs for newspaper plants. Electric and pneumatic drops and lifts for newsprint rolls (top photo)...horizontal conveyors...and automatic interfloor handling systems for stereoplates (bottom) have all been built and installed in the plants of daily newspapers and leading printers. And all are operating successfully today, with speed, efficiency, savings, and complete protection for paper rolls and stereos.

Ask a good engineer about Gifford-Wood conveying systems for newsprint, stereos, magazines, mail sacks, bundles, or broke. Then write for full details on actual G-W installations.

***Free! Idea Book* on engineered materials handling systems. Ask your nearest G-W office.**



GIFFORD-WOOD CO.

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3120

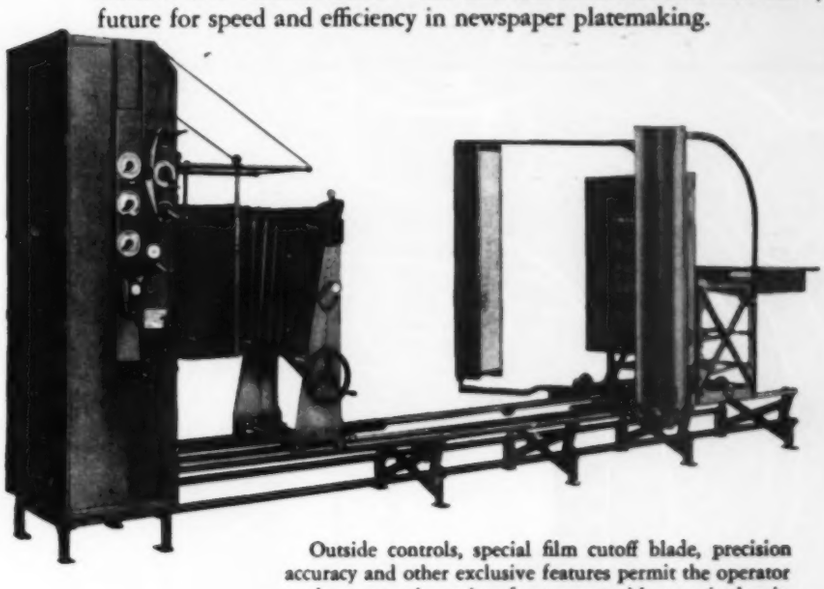
For More Information Circle 151 on Reader Service Card

This Unique CHEMCO Combination

Shortest, Fastest Distance
BETWEEN DARKROOM AND PRESS!

For 30 years, Chemco research and manufacture have anticipated and supplied the newspaper industry's requirements for ever-increasing pictorial coverage. From that continuing leadership now comes a new Chemco team — one that will set records far into the future for speed and efficiency in newspaper platemaking.

The Model F-1200 Roll Film Camera



Outside controls, special film cutoff blade, precision accuracy and other exclusive features permit the operator to shoot an entire series of exposures without a single trip to the darkroom. Using Chemco Paper Base Stripping Film, with its long range and sensitivity, you're assured high production of exactly right negatives to meet any deadline.

AND

The Dow-Chemco Fast Etch Machine*

*Manufactured under license from The Dow Chemical Co.

if it's chemco it's best for platemaking

Uses the Dow Powderless Etch process—etches plates up to full page size—at a speed rate that keeps pace with the F-1200 Camera's fast negative production. Turns out high quality line and halftone work on magnesium without flat etching or powdering.

Here's a natural team to save time in plate processing — because it eliminates so many of the old fashioned "stop-and-go" steps—providing new efficiency, economy and profit. Production moves swiftly and smoothly, and can produce up to *4 times more* plates than is possible with ordinary methods!

Like the full story? It's worth hearing. Ask your Chemco representative, or write direct!

chemco **PHOTOPRODUCTS COMPANY, INC.** GLEN COVE, N. Y.

ATLANTA BOSTON CHICAGO DALLAS DETROIT NEW ORLEANS NEW YORK

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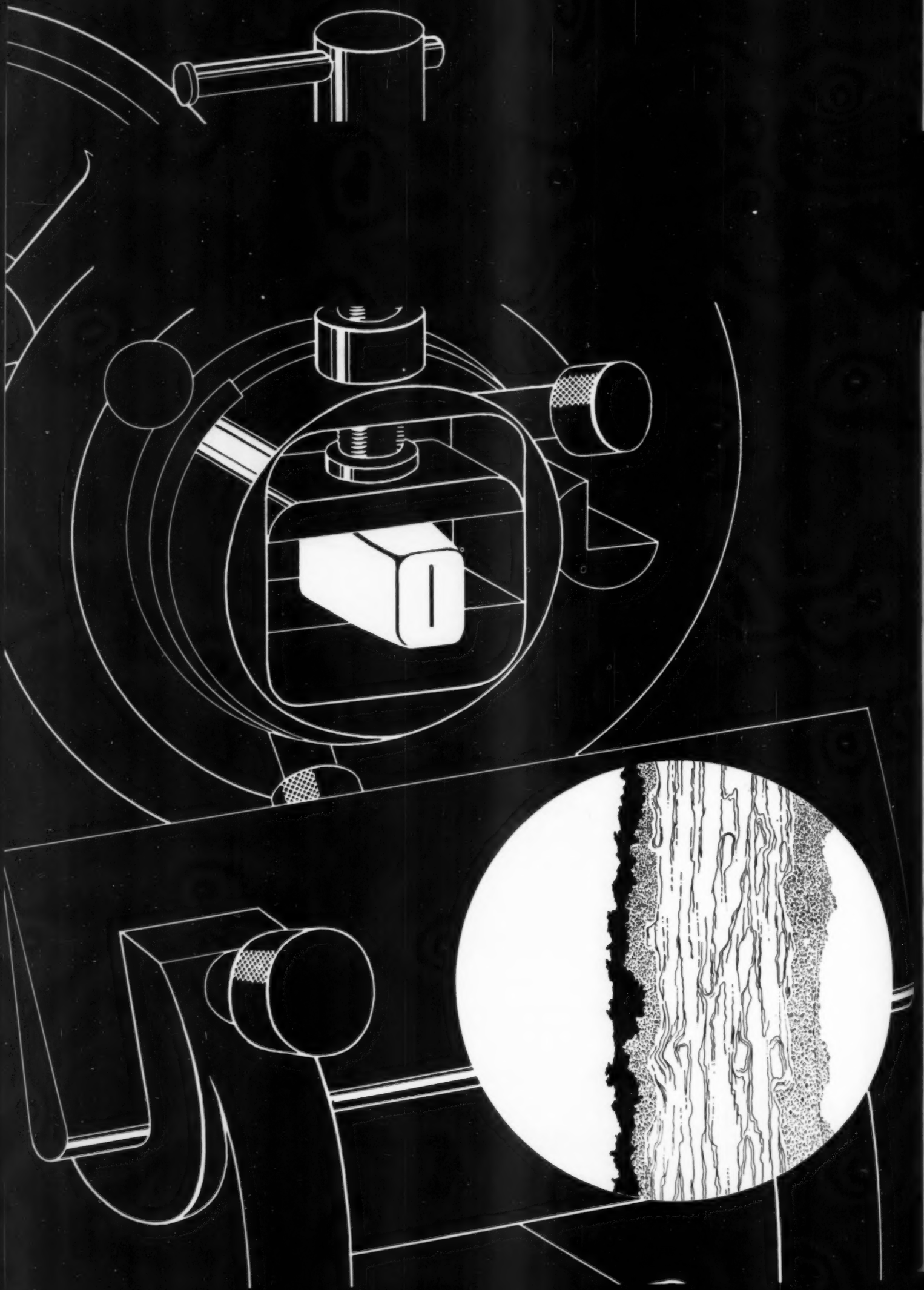

IPI experts analyze magnified cross-sections of paper stock to study ink penetration . . . and give you better quality printing

To grasp the full story of how printing ink behaves on paper, you must "read" the edge of a printed page enlarged many times by a microscope.

The preparation of such a specimen for study is one of the challenges to a microscopist.

The first successful method for the preparation of intact sections of paper and board stock was developed at Interchemical research laboratories. It involves a special technique of embedding the stock which supports the delicate structure of the fibers in sections as thin as 5 microns. After the stock has been embedded in mounting material such as vegetable gum, it is placed in the jaws of a microtome, a sort of scientific meat slicer. This machine provides specimens that are tissue thin for study under a microscope.

The artist's sketch, at left, taken from actual photomicrographs, represents an extreme case of roughness of a magnified cross section of printing ink on coated stock. The ink film is seen as a jagged red line extending along the rough, irregular surface of the coating. Next comes the base stock and at the far right is the coating on the back of the paper, displaying peaks and depressions on the printing surface.

IPI technicians use the microtome to examine the binding characteristics of IPI printing inks . . . and to determine the depth of ink penetration of the fibres or the coatings.

This further example of IPI research which leads to quality control techniques means higher quality printing inks for you—and better quality printing for your customers.

IPI service at work for you

Printing plants of all sizes are invited to use IPI's complete ink service facilities in printing centers from coast to coast. Each IPI service station and branch is staffed by local experienced ink men, well-seasoned in the special printing problems of each locality. They are always on call to help you solve any printing problems—large or small—that may arise. For know-how that comes from generations of graphic arts experience, for prompt ink service with a personal touch, contact IPI.

IPI, IC and Vaporin are trade marks of Interchemical Corporation

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RELY ON IPI FOR LEADERSHIP IN INK RESEARCH

For More Information Circle 74 on Reader Service Card

Why you can benefit with
MAGNESIUM PLATES

Magnesium is becoming increasingly popular in the graphic arts field. Here are the advantages engravers and printers alike are now enjoying with magnesium photoengraver's metal.

rapid etching. Acid baths do their job much faster on magnesium, and less acid is required. This means more plates, faster, with deeper etching and more positive control. These outstanding characteristics are even more advantageous when magnesium is used with the Dow Etch Process, a method for producing shoulderless engravings that cuts engraving time and greatly increases quality.

uniform gauge. Magnesium plate is made to precision tolerances to assure uniform flatness and thickness. This makes possible maximum accuracy in engraving and minimum make-ready time on the press.

dimensional stability. An unusually stable metal, magnesium will not shrink or stretch during processing.

hardness and strength. Magnesium is one of the toughest and most durable metals used in the graphic arts field. It retains a good image under long and severe conditions of use. Runs of one and two million from the same magnesium plate are not uncommon.

fine grain. The size of magnesium grain is less than 0.001". This small grain size means magnesium has superior structural strength and is highly resistant to distortion.

light weight. Weighing only 1/5 as much as copper, 1/4 as much as zinc and steel, magnesium is easier to handle, both on and off the press. As a result, higher press speeds can be attained with magnesium printing plates.

color. Because of its rigidity and superior dimensional stability, magnesium is excellent for register in color work and permits substantial savings in color plate costs.

machinability. Heavier depths of cut can be made with greater speed. Magnesium is easier to saw, route and bevel than any other metal.

re-etching. Magnesium can be readily re-etched by slightly modified procedures.

Contact your local metal supplier for magnesium photoengraver's metal or write to us for more information. THE DOW CHEMICAL COMPANY, Midland, Michigan, Dept. MA 1421BB.

YOU CAN DEPEND ON DOW

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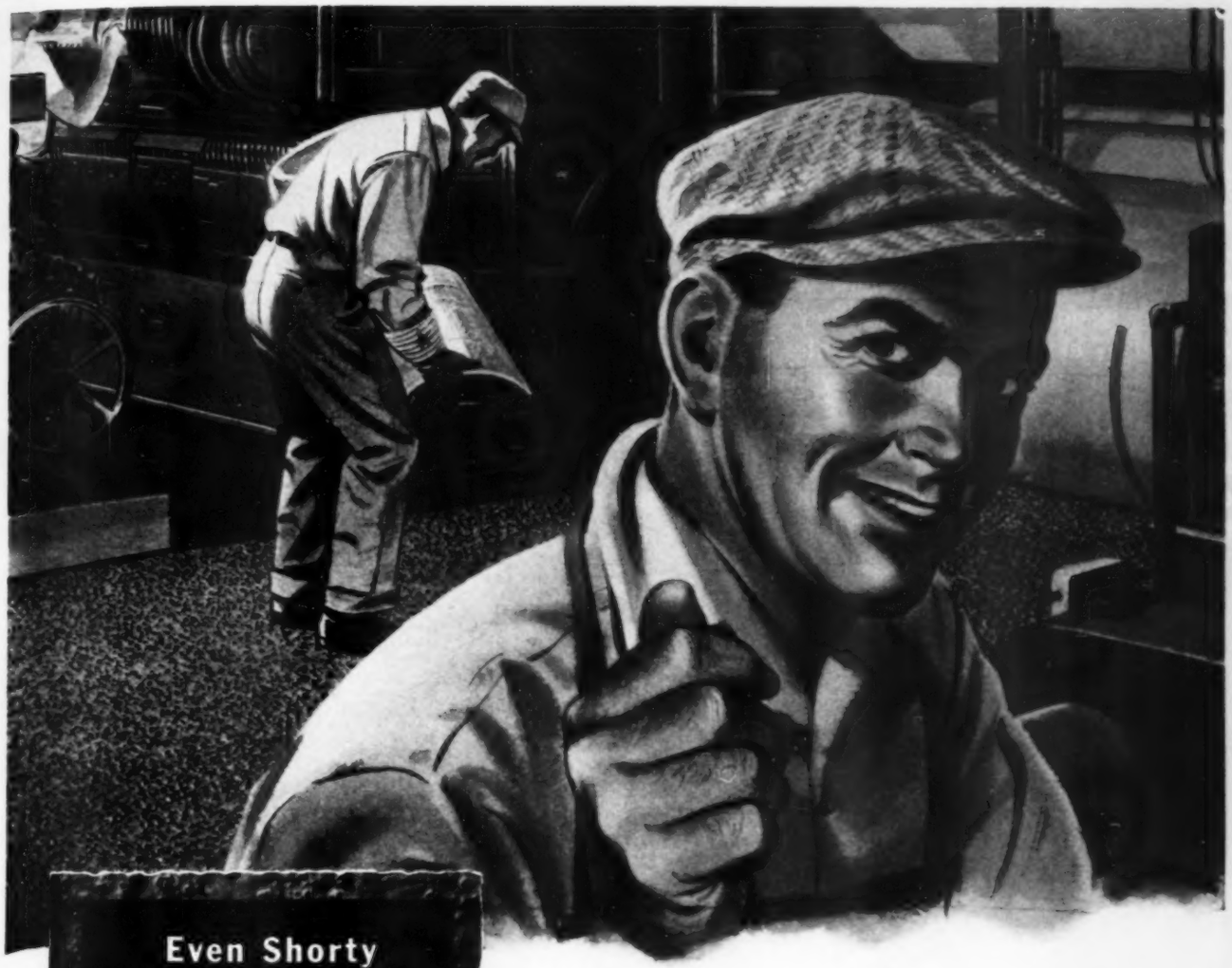


Even Shorty doesn't slip on this new stuff

"This new stuff" is the world's only abrasive rolled steel floor plate—A.W. ALGRIP—a super-safe footing under the *most hazardous* slipping conditions—including those caused by ink mist and oil.

"Even Shorty doesn't slip" sums up the ALGRIP safety story. ALGRIP's exceptional non-slip properties result from a patented process in which a grinding-wheel type abrasive is rolled—*not coated*—to a controlled depth as an *integral* part of tough steel plate. Usage merely exposes more abrasive.

Make a test installation in your worst slipping area. Use ALGRIP as an overlay or as independent flooring—it fabricates easily and requires no maintenance. Try it—and watch your ALGRIP installation pay for itself as accident and insurance rates go down.

ALGRIP ABRASIVE ROLLED STEEL FLOOR PLATE

ALGRIP—*approved for safety by Underwriters' Laboratories*

ALAN WOOD STEEL COMPANY

Conshohocken, Pa.

Please send me A.W. ALGRIP Booklet AL-830

Name_____

Title_____

Company_____

Address_____

City_____ Zone_____ State_____

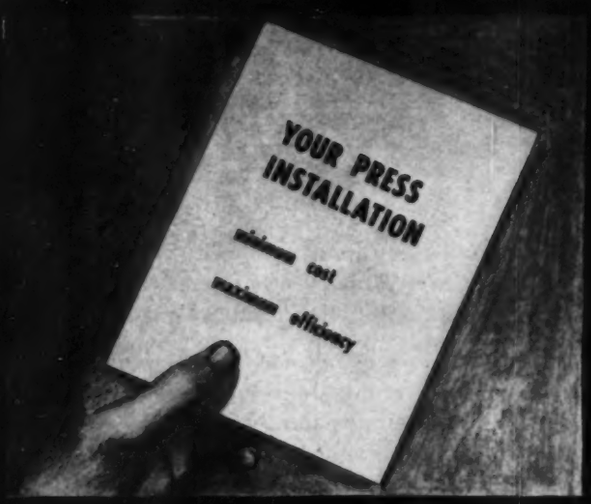
OTHER PRODUCTS:
A.W. SUPER-DIAMOND rolled steel floor plate—Plates—Hot and cold rolled sheet and strip—(Alloy and Special Grades)

For More Information Circle 4 on Reader Service Card

INSTALLATION THROUGHOUT THE NATION

To-day, masterful news press installation demands something more than engineering skill, competent workmen and superlative equipment. This is an operation requiring years of invaluable experience —the kind of experience that enables an organization to meet and handle any problem or emergency with professional decision.

With no installation too large or too small, including complete plant moves, C.N.I. is prepared to offer you the ultimate in fast, modern economical service, tempered with the exacting care that has established our reputation in this field.



YOUR NEWSPAPER PRESS

- INSTALLED
- ERECTED
- DISMANTLED
- MOVED
- CONVERTED

ATF *Announces*... Finer, faster service for the rapidly growing family of ATF Press Owners

There's good news about service and parts for all ATF press owners in the newly announced expansion of ATF Branch Offices.

Each of ATF's 10 conveniently located branch offices has a newly designed, highly functional and fully stocked parts department. Service facilities and serviceman coverage have been developed to keep pace with these modern parts departments—so ATF's finer, faster service will be as near and convenient to you as your telephone.

NEED PARTS?... NEED SERVICE?... NEED A NEW PRESS?
NEED OTHER PRINTING EQUIPMENT?... Contact the nearest ATF Branch Office listed here.

NEW YORK
200 Varick Street
New York 14, New York
Phone: WOrth 4-8510
Manager: Louis A. Croplis

CHICAGO
519 West Monroe Street
Chicago 6, Illinois
Phone: FRanklin 2-1188
Manager: Arthur R. Bink

ATLANTA
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Atlanta 2, Georgia
Phone: JAckson 2-4285
Manager: W. Joseph Taylor

SAN FRANCISCO
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San Francisco 2, California
Phone: GRaystone 4-0262
Manager: Willis C. Johnston

BOSTON
273-285 Congress Street
Boston 10, Massachusetts
Phone: LIberty 2-8625
Manager: Carl A. Nelson

PHILADELPHIA
210 North Broad Street
Philadelphia 2, Pennsylvania
Phone: LOcust 7-0470
Manager: H. S. Ferguson

CLEVELAND
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Cleveland 14, Ohio
Phone: MAin 1-1787
Manager: Stephen Mucha

CINCINNATI
20 East 9th Street
Cincinnati, Ohio
Phone: CHerry 1-2037-8-9
Manager: John C. Jackson

DALLAS
604 South Akard Street
Dallas 2, Texas
Phone: RIverside 2-8701-2-3
Manager: T. K. Branstord

LOS ANGELES
1314 West Ninth Street
Los Angeles 15, California
Phone: DUnkirk 5-2173
Manager: Orson H. Udall

IN THE ROCKY MOUNTAIN STATES
A. E. Heinsohn
Printing Machinery & Supplies
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DENVER
1443 Blake Street
Denver, Colorado
Phone: TAbor 5-8251

ALBUQUERQUE
5231 Central Avenue West
Albuquerque, New Mexico
Phone: 3-9581

PHOENIX
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Whatever your printing needs may be, you will find your ATF representative capable, helpful and vitally concerned with aiding you in making profits from printing.

AMERICAN TYPE FOUNDERS ATF **200 ELMORA AVENUE, ELIZABETH, N. J.**

better, more profitable printing... from the most complete line of equipment

For More Information Circle 10 on Reader Service Card

DEXTER

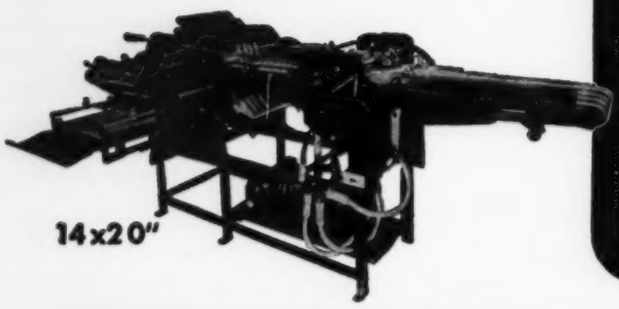
There's a Cleveland for

Cleveland Model, "WW" Folder

With Continuous Suction or Friction Feeder

Handles letters, circulars and folders. Makes one fold, two parallel folds or a combination of parallel and right angle folds. Automatically feeds and folds sheets as large as 14 x 20" and as small as 3 x 4". Two fold plates in parallel section followed by three in right angle section. Rubber rolls optional.

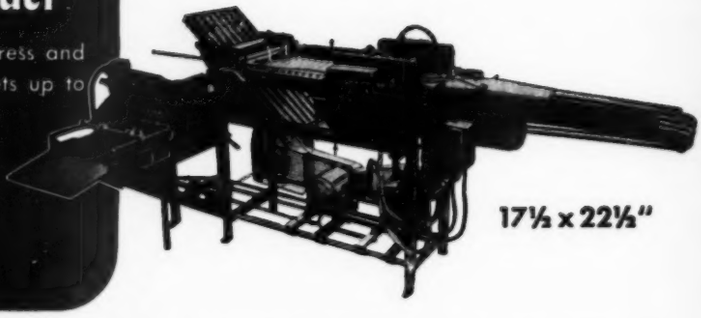
Can be equipped with small signature attachment for folding package inserts and "miniature folds", down to ¾"



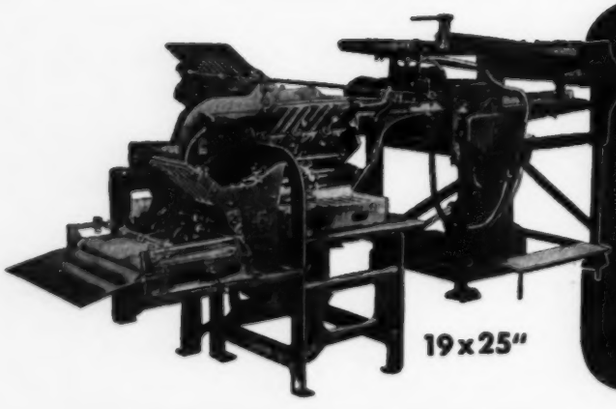
14x20"

Cleveland Model "AT" Folder

Efficiently handles the product of 17½ x 22½" letterpress and offset presses. Folds accurately, at high speeds, sheets up to 18 x 24" in wide variety of impositions. Four fold plates in parallel and four in the right angle section provide for flexibility of product. Adjustment is simple, construction sturdy. Small signature attachment available for folds as small as ¾" width.



17½ x 22½"



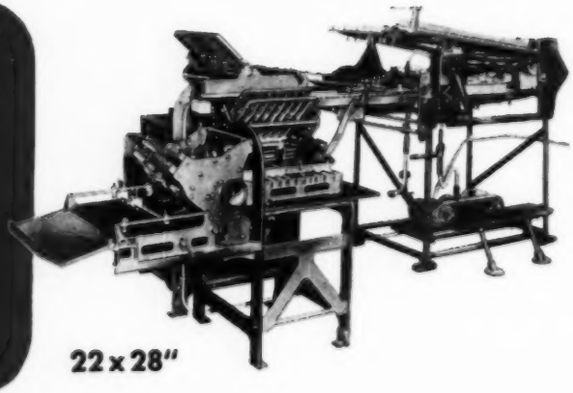
19x25"

Cleveland Model "OS" Folder

Ideal for the small and medium sized job printing plants. Handles maximum sheet size of 19 x 25" and minimum of 4 x 6". Three folding sections of parallel and right angle folds. Folds 16 page signatures in three right angles in page sizes from 6¼ x 9¼" maximum to 2½ x 3" minimum.

Cleveland Model "OO" Folder

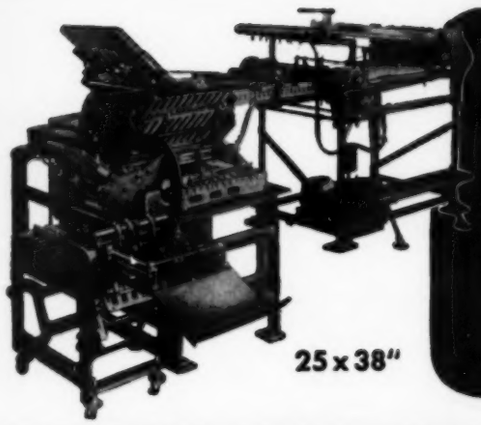
Popular model for the medium sized popular printer or lithographer. In its size range are included all folding combinations of parallel and right angle folds. The model "OO" handles sheets for parallel folds up to 22 x 34" and right angle folds up to 22 x 28" with a minimum sheet size down to 4 x 6".



22x28"

every folding requirement..!

DEXTER

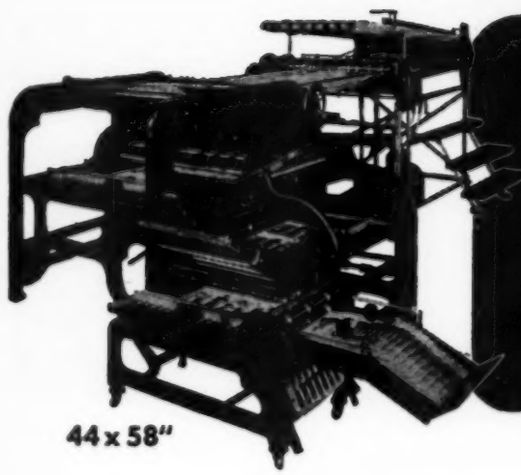


Cleveland Model "MS" Folder

Serves medium sized printing plants with volume work where trade binderies are not readily available. Maximum sheet size 25 x 38" for both right angle and parallel folding and for work and turn up to 38 x 50". Its range includes all types of folds on 25 x 38" sheet including gang work and right angle multiple signatures. Uses minimum of floor space and its versatility gives it an unusually high earning power.

Cleveland Model "MM" Folder

This model Cleveland can make one to four parallel folds in sheet sizes from a maximum of 28 x 58" down to 5 x 7" and one to four right angle folds from a maximum of 28 x 44" down to 8 x 8" plus all practical combinations of parallel and right angles folds. It can also handle gang work and right angle multiple signatures. Profitable for printers and lithographers as well as binders.



Cleveland Model "KK" Folder

Can handle sheets up to 44 x 64" in the parallel sections and 44 x 58" in the right angle with a minimum of 12 x 16". The KK will make one to four parallel or right angle folds plus all practical combinations of parallel and right angle folds within its range. A map folding attachment is available.

ILLUSTRATED CIRCULARS ARE AVAILABLE FOR ANY OF THE ABOVE MACHINES

DEXTER FOLDER COMPANY
DIVISION OF MIEHLE PRINTING PRESS & MFG. CO.
General Sales Office
219 East 44th Street New York 17, N.Y.

For More Information Circle 42 on Reader Service Card

Equipment and Supplies

(Continued from Page 10)

ply base grips solidly to the face throughout the life of the blanket. It is claimed the compound is resistant to all ink solvents and washes. The stick-tight base, according to Dayton Rubber, means longer life for the blanket, longer continuous runs and better dot reproduction. It is also claimed the new base compound is resistant to swelling, high resilience and quick recovery from smashes. For further information, please circle No. 258 on the Reply Postcard.

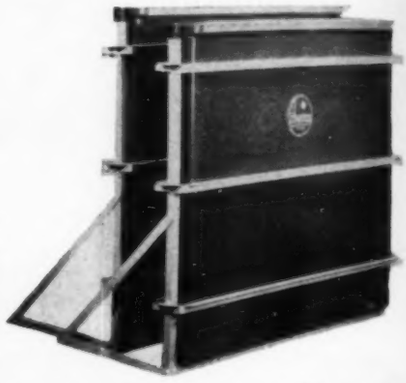
Press Cutting Rubbers

Charles Adkins has been appointed a distributor for what are called Economy Cutting Rubbers. The rubbers are made by the Press Rubber Co. They are fabricated from virgin gum rubber and are intended for use on newspaper and rotogravure printing press folders. As is customary, the rubbers may be turned for a new cutting face when desired. For further information, please circle No. 256 on the Reply Postcard.

Cold Top Developing Tank for Magnesium

An all-plastic cold top developing tank and dipper are Chemco's solution to the problem of galvanic pitting of magnesium plates during coldtop developing. Coldtop on magnesium has always required special handling due to the electrolytic action of magnesium with other metals and with the salts of other metals.

The tank is made of rigid plastic sheet, supported by a custom-fit steel frame. Tank and frame are arranged so two or more units can be nested (as in this picture), front to back,



in minimum floor space. The cover is close fitting and is continuously hinged.

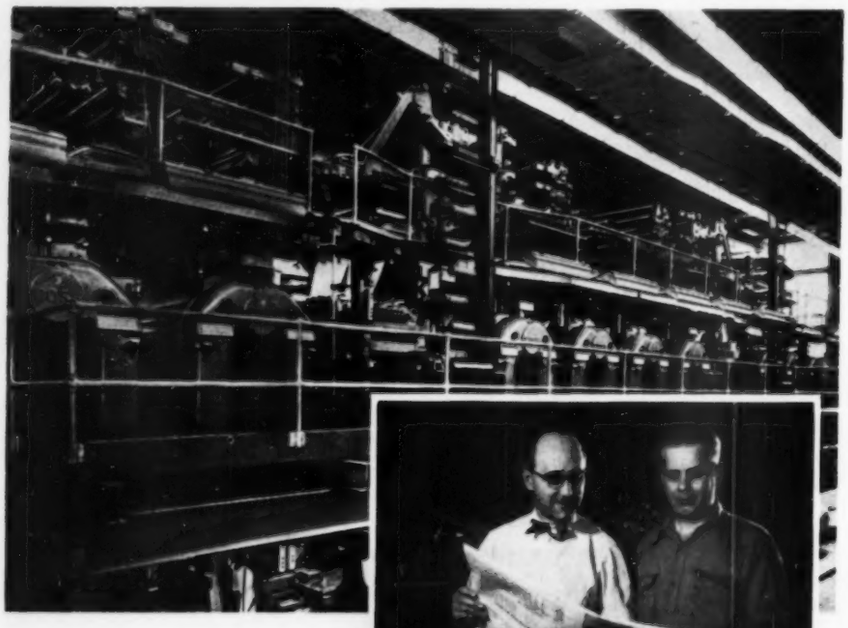
These tanks have been designed for normal coldtop work and for processing Gacoprints for Dow etching. Because three tanks and stands can be nested one behind the other, passivating, developing and scumming-out magnesium prints for Dow process work can be done without moving from the sink. For further information, please circle No. 251 on the Reply Postcard.

Type Form Tieup Lock

A solution of the eternal string problem in composing rooms has been announced by Mendez Company. The Mendez device for tying up type forms still makes use of cotton cord. However, a small device is utilized to tighten the heavier string around

the type form quickly. The Tieup Lock consists of two die cast pieces. The main piece consists of a castellated base ¾ in. wide by 1 in. deep, by ¾ in. high. The base is placed centrally at the bottom of the composition to be secured with string. The cord is passed through a slot in the castellated section atop the base, wrapped once around the type and the leading part of the cord is passed through the same slot into which the free end of the cord was laid. Now a slotted key is placed three-fourths of the way down over the two sections of string resting in the slot in the castellated base. The slotted key, by means of the projecting wings, is twisted until the string has been drawn taut around the

(Continued on Page 24)



Newspaper and Commercial Printers prefer ZOMO ELECTRIC ZINC

Precision gauge, uniform composition, and exclusive machine-cut surface guarantee photoengravings of greater contrast and higher fidelity stereotypes, electrotypes and mats.

"Better Plates for Better Printing"

ZOMO ZINC, the all purpose, high quality smooth etching metal.
A-Z ALLOY, toughest zinc made for direct printing and extensive mat molding.
OWL BRAND, a non-buckling, smooth etching, medium tempered zinc alloy.
MICRO-METAL, superfine grain zinc for powderless or conventional etching.
ZOMAG, the ideal lightweight magnesium alloy for conventional or powderless etching processes.

Atlantic Zinc Works, Inc. • Rolled Plate Metal Co. • Brooklyn 31, N. Y.

PB-RAS

For More Information Circle 14 on Reader Service Card

For More Information Circle 58 on Reader Service Card→

Brings More Color to the Growing Spokane Market

THE SPOKESMAN-REVIEW AND SPOKANE DAILY CHRONICLE INSTALL 9 GOSS UNITS

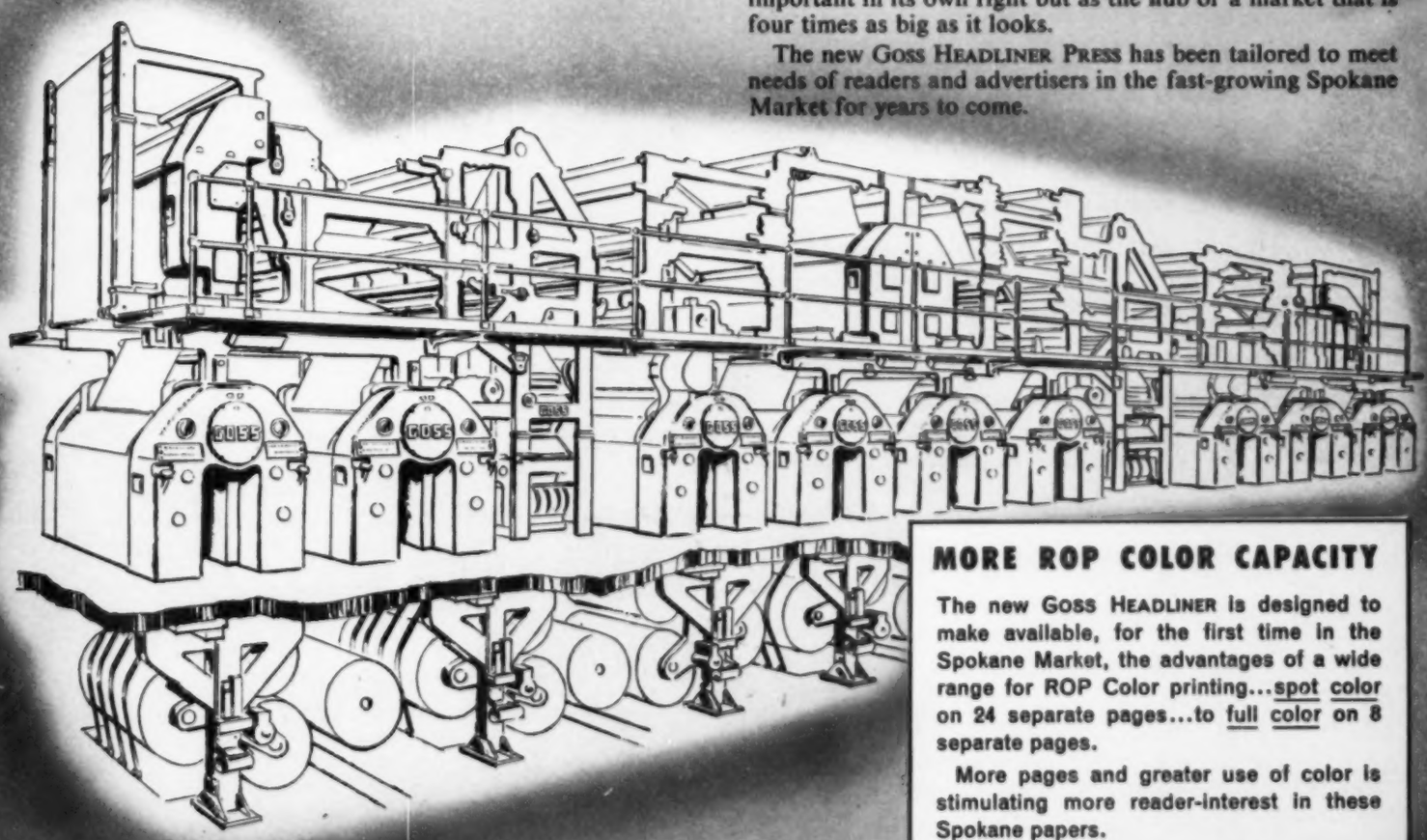
A new era of color has opened in the billion dollar Spokane Market...served by The Spokesman-Review and Spokane Daily Chronicle.

To give their readers an editorial package of highest possible quality, these great newspapers have installed nine HEADLINER units, two superimposed color cylinders, four superimposed vertical color couples—all with Goss Tension Lockup—and two folders with balloon formers and Goss Reels-Tensions-Pasters.

The Spokesman-Review and Spokane Daily Chronicle cover one of the nation's biggest marketing areas...an "Inland Empire" that extends from the Cascades to the Rockies, including parts of four states...a thriving lumbering, farming, mining, and manufacturing region, where an abundance of low-cost hydroelectric power is adding further impetus to industrial growth.

Spokane, with a city zone population of 223,000, dominates commerce throughout an 81,000 square-mile area with population of more than a million. Thus Spokane is not only important in its own right but as the hub of a market that is four times as big as it looks.

The new GOSS HEADLINER PRESS has been tailored to meet needs of readers and advertisers in the fast-growing Spokane Market for years to come.



MORE ROP COLOR CAPACITY

The new GOSS HEADLINER is designed to make available, for the first time in the Spokane Market, the advantages of a wide range for ROP Color printing...spot color on 24 separate pages...to full color on 8 separate pages.

More pages and greater use of color is stimulating more reader-interest in these Spokane papers.

THE GOSS PRINTING PRESS COMPANY

5601 WEST 31ST STREET **CHICAGO 50, ILLINOIS**

For More Information Circle 50 on Reader Service Card

Don't settle for anything less than a Baldwin® Press Washer!

A Baldwin Press Washer gives you important advantages you just can't get with any other equipment . . . advantages that mean substantial savings in time and money.

You Get the Advantage of Fast Wash-Ups

A Baldwin Press Washer reduces wash-up time to a few minutes and gives you thorough cleaning in the bargain. This makes color change-overs less of a chore for the pressman and reduces down-time to a minimum.

You Get the Advantage of Wide-Open Accessibility

A Baldwin Press Washer is designed with the pressman's problems in mind. The Press Washer becomes an integral part of the press without sacrificing the accessibility the press manufacturer built into his machine.

You Get the Advantage of An Easy-to-Clean Cleaner

A Baldwin Press Washer is installed at the operating side of the press and the blade can be cleaned from the top without removing it. What's more, it takes only a few seconds to remove the drip pan when it's time to clean out the accumulation of sludge and muck.

You Get the Advantage of Long-Wearing Blades

Baldwin Press Washer blades are the result of hundreds of experiments in the laboratory and exhaustive tests in the field to determine which materials assure the best results and the longest blade life.

And Remember This!

Baldwin engineers work constantly in your behalf, and patent applications continue to be made on features of Baldwin equipment. That's why you can be sure there's a Baldwin Press Washer that's just right for each of *your* presses. Write for complete information and illustrated literature —be sure to include the make, model, and size of your equipment.

WILLIAM GEGENHEIMER CO., INC.

80 Roebling Street
Brooklyn 11, New York

Manufacturers of Baldwin Ink Fountain Agitators • Baldwin Press Washers • Baldwin Water Stops • Baldwin Water Levels

For More Information Circle 56 on Reader Service Card

For More Information Circle 93 on Reader Service Card→

The Miehle

Performance is the reason...

Miehle 61 and 76 Sheet Fed Rotaries —one color to five color—are operating in label, carton, publication, book and commercial printing plants from coast to coast. High production, simplified makeready, improved quality and unit construction make them the accepted standard of sheet fed typographic rotary equipment.

Equipment and Supplies

(Continued from Page 20)

type, after which the key is pushed down to lock the key by means of the wings resting in opposite slots of the castellated section. The loose part of the string supply is then cut.

Mendez Tieup Locks are supplied singly for trial or in sets of varying quantities. For further information, please circle No. 255 on the Reply Postcard.

Lithographic Ruling Kit

Contained within a plastic case, the lithographer's No. 5 Ruling Kit announced by Mark Specialty Co. is designed for ruling lines on negatives. Body of the hexagon shaped pen is 5/16 in. by 5⅜ in. long. The chuck at either end is supplied with a knurled shell to permit changing the needles quickly. Four different size needles are furnished with each kit. For further information, please circle No. 252 on the Reply Postcard.

Bindery Platform Truck

Designed for binderies and bookbinders, an all steel welded platform truck has been developed by Oral T. Carter and Associates, Inc. There are racks on two adjoining sides, with vertical flats. This is to facilitate stacking, counting, transporting and unloading of books, other printed matter or materials, states Carter.

The right angle racks brace unbalanced die-cut stacks or heavy

loads of books being trucked from stitcher to cutter.

The shelf measures 36 in. by 26 in., and is made of 12 ga. steel, permitting a capacity of 800 lbs. Side racks are 35 in. high from the shelf.

All metal parts are enameled. The truck is fitted with 5 in. hard rubber tired Kilian BH Casters, two swivel and two rigid. For further information, please circle No. 257 on the Reply Postcard.

Color Separation Unit

The Anderson Color-Sep unit, a color separation machine and process (all in one package) is designed to produce three color and four color process separation negatives from transparencies. Announcement was made by Paul Anderson Mfg. Co. Transparencies may range in size

from 35 mm. to 5 in. by 7 in. and are enlarged or reduced to desired size.

The screened, cropped negatives produced with one exposure for each separation are said to be cropped to exact size, regardless of size, shape or pattern. Each separation bears common register marks and is ready

(*Continued on Page* 26)

here's how Rouse REDUCES YOUR TIME COSTS

CUT A FULL GALLEY OF MIXED MEASURES SLUGS IN ONLY 35 SECONDS

Rouse BAND SAW

No more gauge setting! No more reclamping or measuring! That's why the Rouse Band Saw offers you by far the most economical way to accurately cut slug lines to different measures in the shortest possible time. No other machine nor method can even come close to this achievement.

If you operate one or more linecasting machines on variable measure composition, the Rouse Band Saw will do the work of hours in minutes. Expensive time saved will be unusually great in work requiring frequent changes in line measures, such as ad work, catalog runaround work, etc.

NEW ROUSE CATALOG ----------→ Write for your copy TODAY!

CUT 1000-1200 ACCURATE MITERS IN ONLY 1 HOUR

Rouse POWER MITERER

If you need miters in either small or large quantities, no other machine nor method can turn out anywhere near as many perfect joining miters from strip material. That's how the Rouse Power Miterer can slash your time costs by doing work in minutes that now takes hours. It quickly pays for itself in expensive time saved.

From the smallest job shop up to the largest plant, only Rouse makes a Power Miterer for every type of use. Can be bought as a bench model or with any other equipment you wish.

Virtually every printing plant in the world uses one or more Rouse Time-Saving Products for Printers

H. B. ROUSE & COMPANY
2214 N. WAYNE AVENUE, CHICAGO 14, ILLINOIS

MITERING MACHINES
LEAD and RULE CUTTERS
COMPOSING STICKS
TYPE GAUGES
SLUG CLIPPERS
BAND SAWS

ROUSE PRODUCTS—THE STANDARD OF THE WORLD FOR 50 YEARS

For More Information Circle 121 on Reader Service Card

Cleaner, more uniform ink flow

You'll get more uniform, cleaner ink flow to the inking cylinders with the Hoe ink rail construction. This is an integral part of the exclusive Hoe ink pump system.

Ink flow control is more uniform because the ink is metered by the pump directly to the inking cylinder through tubing and orifices arranged along the length of the ink rail. The rail itself can be readily adjusted to precise tolerances along the full length of the ink drum. The ink pump system strains and agitates the ink supply, *without exposure to the atmosphere.* This closed system—from storage tank to ink rail—prevents contamination from paper dust or other foreign matter and insures a continuous fresh supply of clean ink.

This Hoe feature helps the pressman to achieve better and more uniform results in printing quality . . . with economy in ink consumption. That's one reason for the great popularity of Hoe equipment and one reason why it will pay you to get in touch with Hoe.

R. HOE & CO., INC.

910 East 138th Street, New York 54, N. Y.
BRANCHES: BOSTON • CHICAGO • SAN FRANCISCO

For More Information Circle 69 on Reader Service Card

Glass armored blankets improve quality!

Sharp Halftones, "Solid" Solids Produced by Time, Money Saving Spherekote® Blankets-Drawsheets

Higher quality reproduction day after day, month after month, is a proved benefit of SPHEREKOTE Drawsheets and Blankets. Here's why: The tough, glass-hard, glass-smooth surface resists beating down for millions and millions of impressions. This means "solid" solids, crisper, sharper halftone dots for black and white and better registration on ROP color runs.

Super smooth, the surface is made up of hundreds of millions of microscopic glass beads, each one permanently bonded to a highly resilient rubber base. This glass surface with almost zero affinity for ink, substantially reduces first impression offset problems. Uniform caliper —the result of precision control at every step in manufacturing—gives consistent reproduction across the entire page.

Your presses will produce the quality you demand when you specify SPHEREKOTE Blankets and Drawsheets. For detailed information, write: Minnesota Mining and Manufacturing Company, Dept. FM-37, St. Paul 6, Minnesota.

REG. U.S. PAT. OFF.

SPHEREKOTE BRAND

DRAWSHEETS AND BLANKETS

PRODUCT OF 3M RESEARCH

Made in U.S.A. by Minnesota Mining and Manufacturing Company, St. Paul 6, Minnesota. General Export: 99 Park Avenue, New York 16, N.Y. In Canada: P.O. Box 757, London, Ontario.

For More Information Circle 95 on Reader Service Card

Equipment and Supplies

(Continued from Page 24)

for use without additional handwork, etching or retouching. Furnished charts and instructions aid operator.

Unit consists of modified enlarger; 150 line gray contact screen, modified for positioning on vacuum platen; Model R.T. Eastman densitometer; exposure meter; vacuum pump and head exhaust pump; film contact frame; flash lamp; crop lamp; safe lamp; filter changer and filters, and electrical controls in one panel. Floor space is 4 ft. by 4 ft.; max. enlargement head space is 9 ft. For further information, please circle PEE No. 269 on the Reply Postcard.

Astoria Type Face

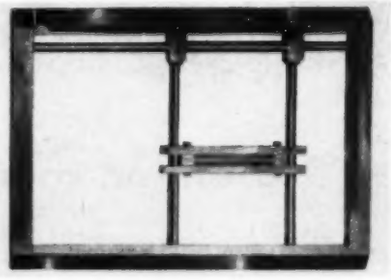
The Astoria type face, which was recently revived by the Art Department of the Bauersche Giesserei under the supervision of Dr. K. Bauer, is being imported by Bauer Alphabets, Inc. A stock of the following sizes is on hand: 12, 14, 18, 24 and 30 pt. For further information, please circle No. 264 on the Reply Postcard.

ABCDEFGHIJKLMN
OPQRSTUVWXYZ

abodefghijklmnopqr
stuvwxyz

Fast Imprinting Chase

Tidings Corporation has developed a fast imprinting chase. The chase is designed especially for use on jobs to be imprinted, including use by greeting card suppliers. Linecomposing machine slug or slugs may be locked quickly within this special chase. The locking bars, at right angles to each other, are adjustable for positioning the type matter in exact position. This movable lockup assembly is adjustable vertically or laterally. Positioning can be obtained by use of the pica scales at the top and right side of the chase. Construction is of chromium plated stainless steel.



Manufacturer states the chase is custom built for each buyer to suit his requirements. Thus press size or sizes of presses together with point size and width of line-slugs should be given when making in-

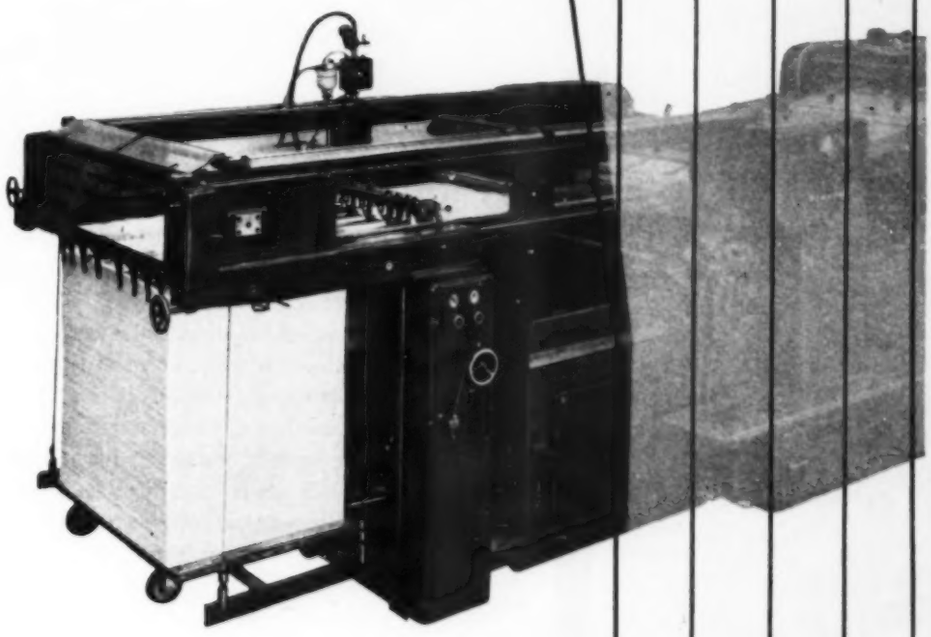
(*Continued on Page* 30)

Introducing

The new TIRFING

Letterpress at its finest and fastest...

The new Tirfing – expressly designed to meet the demands for a faster quality letterpress – now offers the discriminating printer a means of increasing the output of his work (by as much as 1,000 extra copies an hour) while still maintaining the highest standards of printing demanded by the modern market. This new streamlined fully automatic two-revolution press is your answer to increased quality production. Write now for full details.



Speeds—up to 4,000 I.P.H.
Max. sheet size 31" x 41"

Enquire also about the VIKING 2 revolution letterpress, and cutter and creaser—sheet size 35" x 45"

You are cordially invited
to a demonstration of this new press.
For appointments at your convenience please write:
TIRFING PRINTING MACHINERY, Inc.
400 DELANCY STREET, NEWARK 5, N. J.

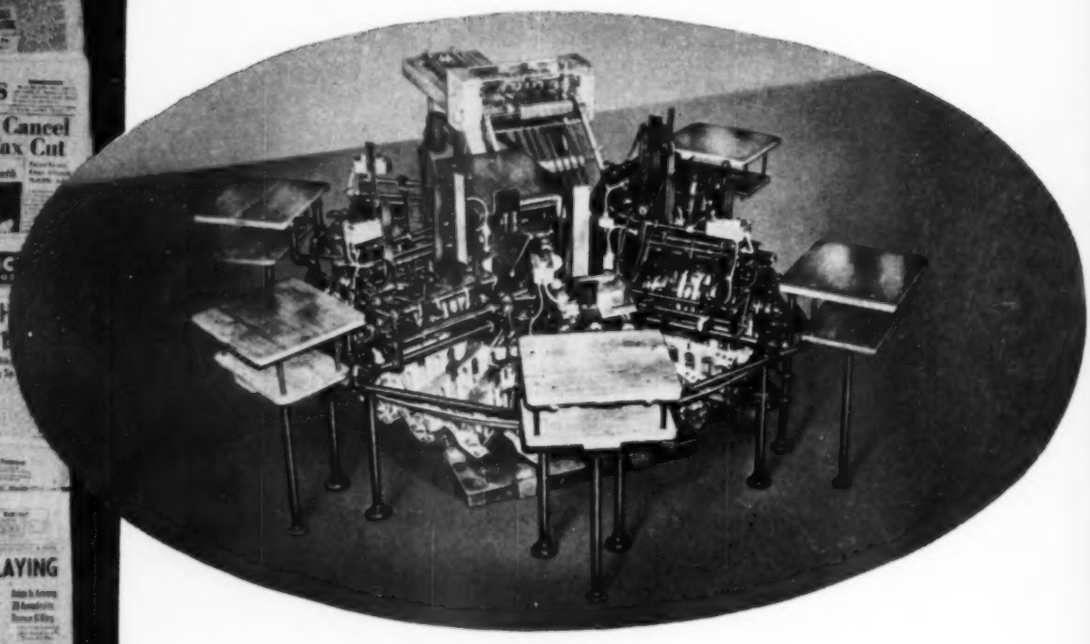
TIRFING

PRINTING MACHINERY, INC.
400 DELANCY STREET, NEWARK 5, NEW JERSEY

For More Information Circle 138 on Reader Service Card

THE INDIANAPOLIS STAR
THE SPOKESMAN-REVIEW
Courier EXPRESS
Ike Seeks to Cancel Scheduled Tax Cut
THE DALLAS TIMES HERALD
The Oregonian
The Evening Star
PRESIDENT SEIZED IN PANAMA SLAYING
BABIES DIE OF EXPOSURE IN PUENTE
Los Angeles Times
L.A. ACCIDENTS MOUNT: JAIL 40 DRUNK DRIVERS
Happy New Year to All Our Readers
The Vancouver Sun
Dulles Says Danger Of War Lessening
The Detroit News
SHEPPARD READY TO REST HIS CASE
THE MILWAUKEE JOURNAL
Officer Shoots Store Burglar on Shorewood Athletic Field
THE TELEGRAM

...more inserts per Dollar



The new four- or five-hopper 24P Sheridan Stuffing Machine offers you the flexibility required to meet all insert conditions.

Advanced engineering gives faster, neater and more economical delivery in various combinations, into jacket or wrap-around sections, at operating speeds up to 12,000 per hour. There are no hit or miss insertions—you get perfect count for every edition. Compact design of the 24P saves considerable floor space.

No matter how tough your stuffing problem may be, you can depend on Sheridan to solve it. A representative will be pleased to explain how the 24P Sheridan Stuffing Machine can help you get out a better looking edition.

For newspapers having more than five sections the Sheridan 48P is available, and for those with two or three sections, inquire about the newest Sheridan 12P.

Write today for our illustrated booklet, without obligation.

SINCE 1835

T.W.&C.B. SHERIDAN CO.

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For More Information Circle 125 on Reader Service Card

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New FLEXITROL AC Unit-Type Drives
New AC-DC Electric Tensions
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New Integrated Control Systems
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For More Information Circle 35 on Reader Service Card

Equipment and Supplies

(Continued from Page 26)

quiry. For further information, please circle No. 254 on the Reply Postcard.

Desk Model Folder

A new model of the Premier Auto-Folder Model CV, with an automatic, electrically powered conveyor-stacker, was announced by Martin-Yale Co. Operated by an a.c. motor the folder is used to handle paper sizes ranging from 9¼ in. by 15 in. to 2½ in. by 4 in., with capacity of 15,000 pieces per hr. depending on paper size. The seven folds commonly used for letters, invoices, mailing pieces, bulletins, circulars are accomplished by two controls.

Folder is finished in steel gray hammerloid finish and chrome. A permanent folding chart with instructions is included. Machine can be loaded while in operation. For further information, please circle No. 262 on the Reply Postcard.

Filmotype Reversing Paper

A sensitized paper, Reversing B, for production of Filmotype Photocomposition reverses, has been developed by the Filmotype Corporation. Used for producing deep etch plates, engravings, silk screen photo stencils, and for reproduction in diazo type equipment. The differences between Reversing B and the standard types of Filmotype sensitized paper are said to be light passing ability, high image density and an emulsion coating that is inside rather than outside the paper as in conventional rolls.

Same size paper reverses can be obtained by setting Filmotype copy on any kind of sensitized paper and inserting this copy and a strip of Reversing B into the Filmotype printing stick. A brief exposure to light completes the reverse. For further information, please circle No. 266 on the Reply Postcard.

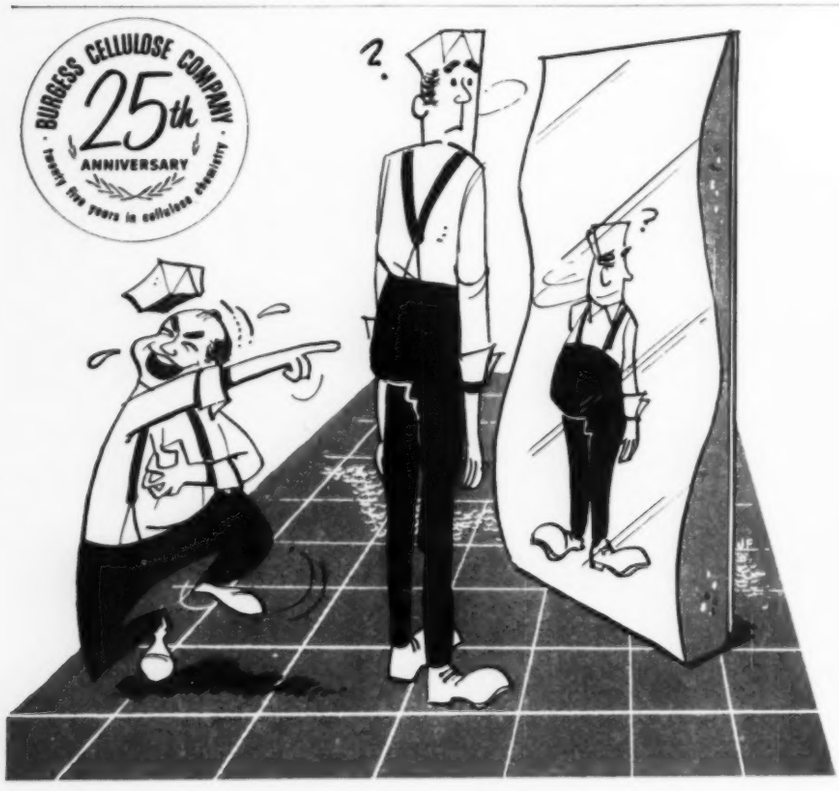
Ink Pump System

A small ink pump has been added to the Graymills Corporation line of agitator pumping systems for flexographic ink. The No. HR6-3025 pump is equipped with an all bronze pumping unit powered with a sparkless 1/25 h.p. motor. Pump is mounted in a brass container of 2 qt. capacity. The entire unit may be mounted near the fountain on a bracket. For further information, please circle No. 265 on the Reply Postcard.

Rubber Blanket Hardener

Harry H. Rogers Co. reports a solution which is designed to seal and surface-harden rubber blankets and eliminate tack for any purpose, especially coated stock which may curl or pick. Called Rogersol JK-162 Blanket Hardener, the solution may also be applied locally to the screen area, states the sponsor, to eliminate slur or spread of dot following or alongside solid area. When applied to the entire blanket, the company claims it will prevent excessive trapping and help control static. For further in-

(*Continued on Page* 99)



Lengthwise Shrinkage is no Laughing Matter

It's a fact that Burgess Mats do shrink less lengthwise for a given width shrinkage. This means minimum loss of lineage and revenue for the advertising department. For this good reason plus the assurance of the best possible reproduction—use Burgess Mats.

BURGESS CELLULOSE COMPANY

Manufacturers and Distributors of
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A Laboratory Product
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Canadian Representative, R. M. Louson & Co., Ltd.,
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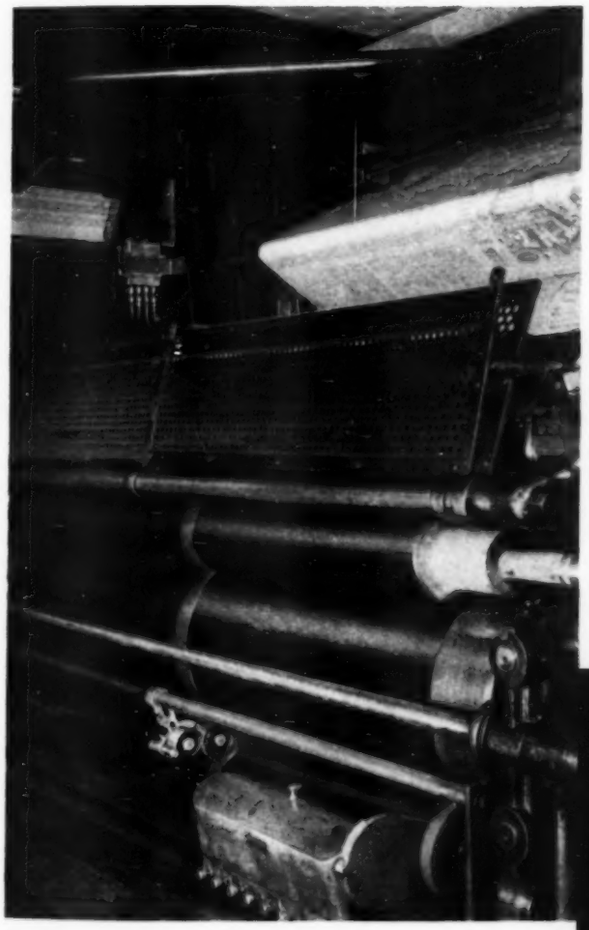
For More Information Circle 23 on Reader Service Card

YOU GET THE FINEST ROP COLOR WITH THIS DAYCO COMBINATION

New Dayco Tru-Set Rollers and Color Separators press-proved on fastest runs...



These New *Dayco Rollers and Dayco Color Separators deliver better ROP color for the same money . . . combine to give you the reproduction and economy you want.*

With the *New* Dayco Tru-Set Roller, use the same plates, ink and paper as always. You'll be amazed at the quality reproduction of halftones, the coverage given solids and type. And with Dayco Color Separators rounding out the combination you'll give your presses more ROP Color flexibility . . . at lower cost without roller cutting.

Hardness of the *New* Dayco Tru-Set Roller is just what *you* need on *your* press. Original grinding, and regrinding too, gives the surface a velvet smooth finish for unmatched ink transfer. And high tensile strength holds that finish . . . reduces marking and column scoring for longer service.

Highly important, the *New* Dayco Tru-Set Roller does not swell excessively — just enough to give grinding stock. In addition, they're fire resistant for extra safety in your pressroom.

So call your Dayco Representative right now for a set of these *New* Dayco Tru-Set Rollers. Either you're completely satisfied or we'll make good. And when you're buying new equipment specify the *New* Dayco Tru-Set Roller to get best results.

For further information write Dayton Rubber Company, Dayco Division, Dayton 1, Ohio.

Dayton Rubber

THE DAYTON RUBBER COMPANY, Dayton 1, Ohio. • 1486 Lakewood Ave., S.E. Atlanta, Ga. West Coast Distributor, Tillicum Rubber Co., Lacey, Wash.

Dayco Rollers . . . for Offset, Letterpress, Newspaper, Corrugated Boxboard, Gravure, Flexography, Coating, Graining, Steel Mills. Dayco Offset Blankets. Dayco Fountain Dividers. Dayco Color Separators.

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For More Information Circle 41 on Reader Service Card

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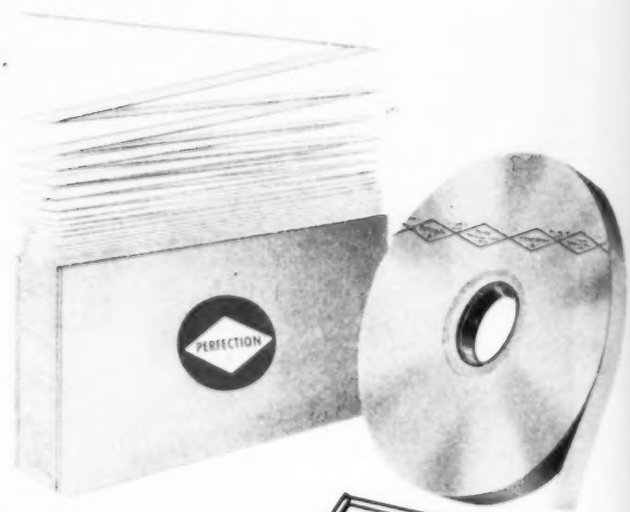

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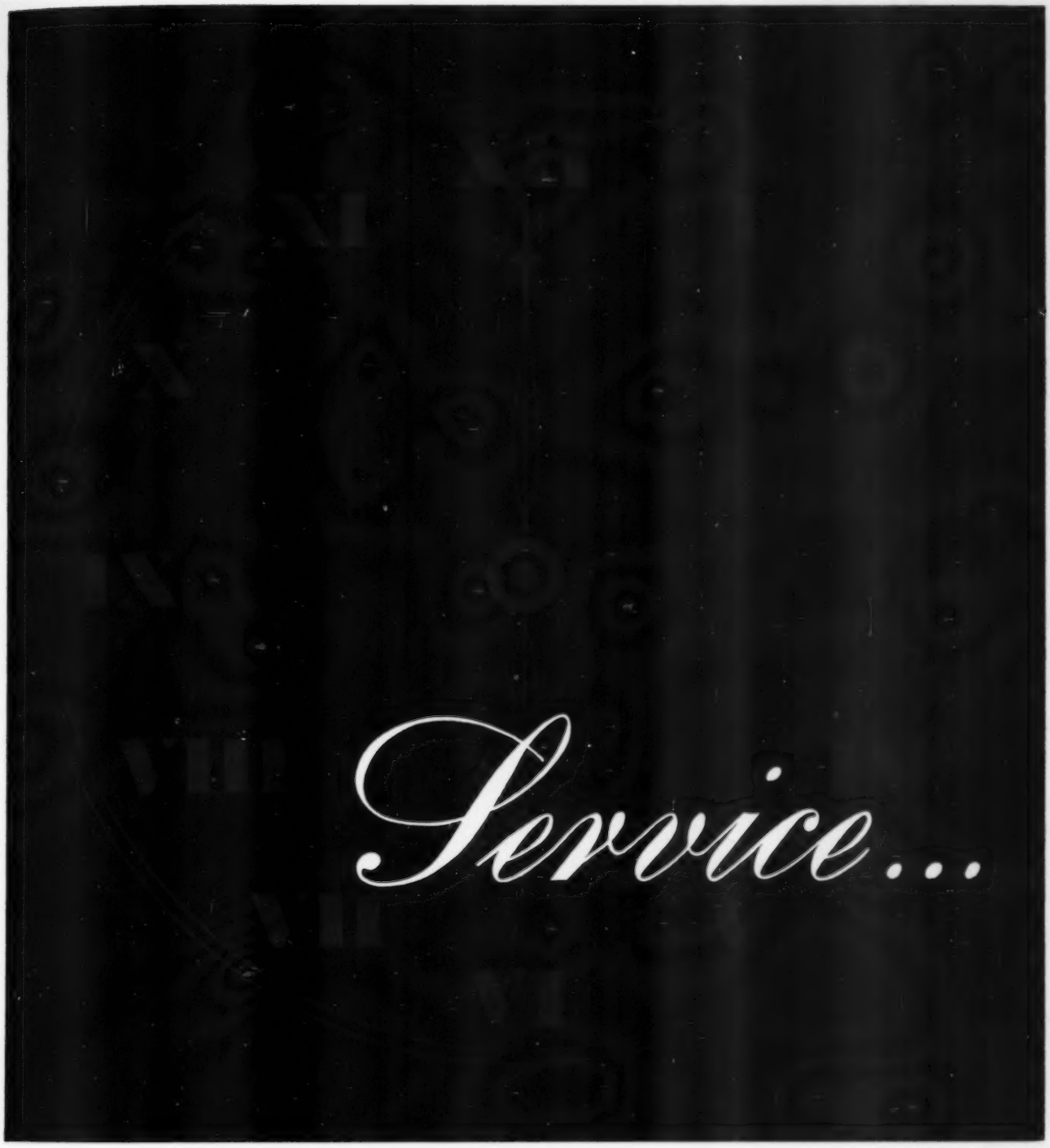

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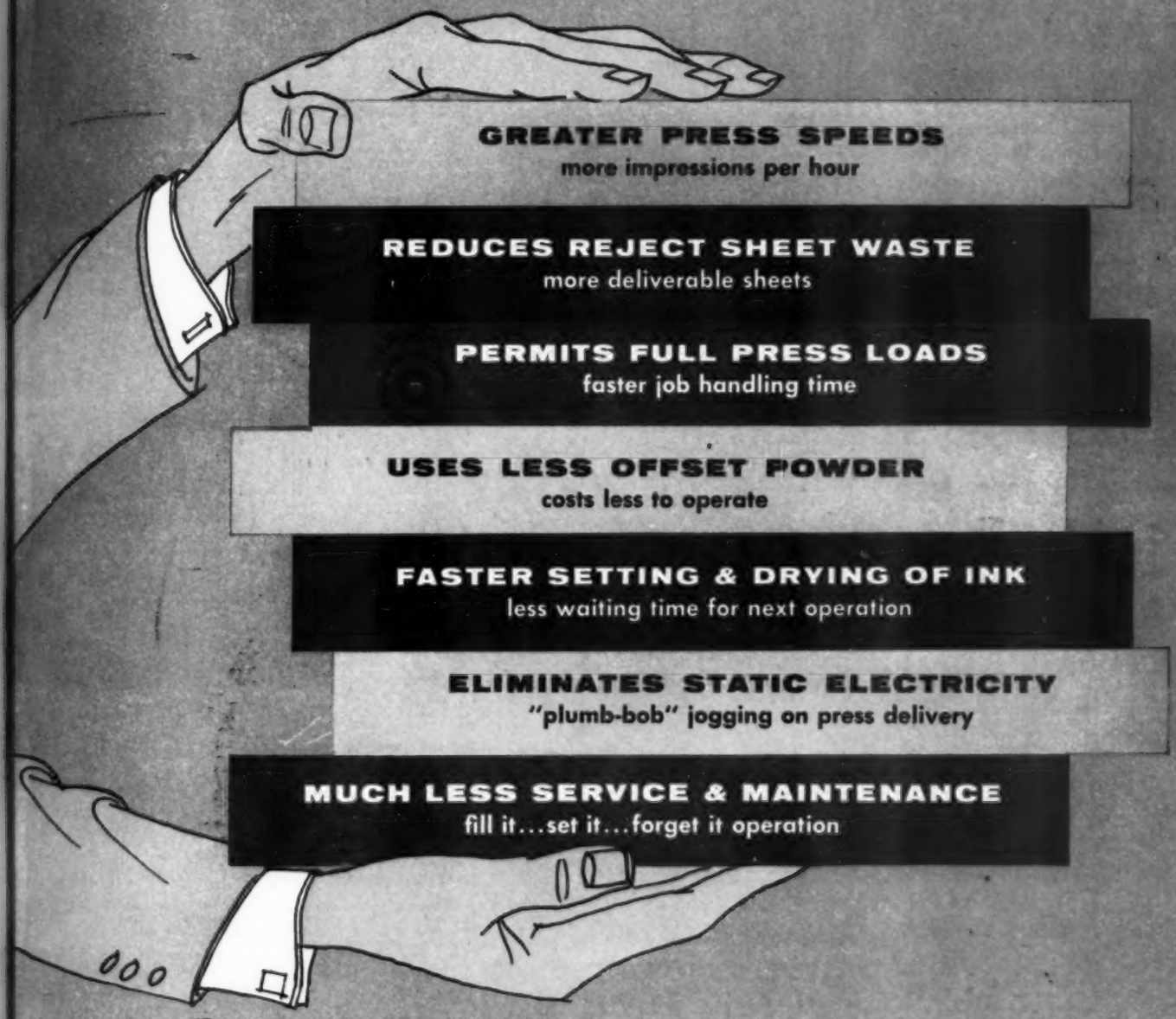

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Literature

Circle Numbers on Reply Postcard—It's Easier and Quicker

Keep Yourself Informed. The folders and bulletins listed below all pertain to modern equipment, supplies, processes and/or methods. These have been prepared especially for plant managers, superintendents and foremen. Please circle the numbers on the Reply Postcard in this issue for the bulletins you wish to receive. Drop the self-addressed card in the mail. *Printing Equipment Engineer* will forward your request.

Composing Room

CARBIDE TIPPED SAW

Gay-Lee Co. has available upon request a one page illustrated bulletin descriptive of Gay-Lee Printers' Thinsaw Carbide Tipped Saws for cutting type, slugs, stereotype base and all new alloys including Dowmetal. For a copy, please circle No. 306 on the Reply Postcard.

MAGIC MATRIX BLACK

A four page 4 in. by 8½ in. illustrated folder has been published by Magic Products Co. Folder is descriptive of Do It Yourself method of treating linecomposing machine matrices so reference letters will be easily visible. For a copy, please circle No. 308 on the Reply Postcard.

DROSS SIFTER

One page illustrated bulletin is descriptive of the dross sifter made by The Monomelt Co., Inc. Sifter fits over top of dross drum and is dustless. For a copy, please circle No. 309 on the Reply Postcard.

TYPE FACES

Intertype Corporation has completed a 56 page booklet in which showings of the Intertype Futura family for linecasting machines are shown. Six weights and companion obliques are included. Eighty-three different fonts which range in size from 6 pt. to 36 pt. are shown. The booklet is printed in black and four colors. For a copy, please circle No. 310 on the Reply Postcard.

STAR QUADDER

The Star Selectro-Matic Quadder is the subject of an illustrated descriptive 8 page brochure. The quadder, manufactured by Star Parts, Inc., can be re-applied to any 30 pica Linotype or Intertype. It can also be adapted to Teletypesetter operation when needed. For a copy, please circle No. 311 on the Reply Postcard.

Platemaking

PHOTOMECHANICAL REPRODUCTION

The entire range of Kodak materials and processes for photomechanical color reproduction developed during 30 yrs. is described in a 12 page booklet prepared by Eastman Kodak Co. Included in the booklet, entitled *Photomechanical Reproduction from Kodak's 8 Ways to Color*, are sections devoted to the five Kodak films, three reflection copy methods, and a listing of 18 ways to photomechanical success. For a copy, please circle No. 312 on the Reply Postcard.

ARC LAMP

nuArc N-110 automatic arc lamp is illustrated and described in bulletin 205A published by nuArc Company, Inc. The motor driven lamp may be used for ROP color reproduction. Sponsor states light control varies in color and intensity not more than plus or minus 5%. For a copy, please circle No. 313 on the Reply Postcard.

WESEL ROUTERS

Descriptive literature is available from Wesel Manufacturing Co. on its RAR-1 Wesel router. Router is built for heavy duty but sponsor states it is easy to operate. Also described in the literature are Wesel router bits. For a copy, please circle No. 314 on the Reply Postcard.

SAW TRIMMERS

Four models of The Morrison Company's saw trimmers are illustrated in a descriptive catalog recently published. Also described is Morrison's saw grinding attachment and other trimmer features. For a copy, please circle No. 315 on the Reply Postcard.

ARCS AND LAMPS

Literature is available from the Strong Electric Corp. on its line of Challenger and Grafarc camera and printing arcs and lamps for Monotype Huebner MH photocomposing machines. The Grafarc Challenger camera arc lamp is adaptable to exposure down to 5 sec. For a copy, please circle No. 316 on the Reply Postcard.

Pressroom

STATIC ELIMINATOR

A two page illustrated data sheet in which is described United States Radium Corp.'s radioisotope-activated static eliminator will be sent to you for the asking. Design and operation of the Ionotron and suggested applications are also given. For a copy, please circle No. 317 on the Reply Postcard.

FLEXOGRAPHIC PRESS

Champlain Company's flexographic press is described and illustrated in a four page bulletin. High operating speeds and accurate color printing are claimed. Unit assembly can be made to provide up to three color stations mounted vertically in one stack. For a copy, please circle No. 318 on the Reply Postcard.

ROP COLOR REGISTER

Cline Electric Mfg. Co.'s Crosfield automatic register control for ROP color is the subject of an eight page color bulletin. Components of the control such as a photoelectric scanner, a control cubicle, a control panel, and an electric motor are illustrated and described. A list of other Crosfield applications and a run down of other Cline products are included. For a copy, please circle No. 319 on the Reply Postcard.

PUSHBUTTON UNITS

A plastic bound 8½ in. by 11 in. illustrated catalog is available from Cutler-Hammer, Inc. Catalog is entitled *Master Design* and is descriptive of newly developed pushbutton units for press and machinery electrical controls. For a copy, please circle No. 320 on the Reply Postcard.

MIEHLE OFFSET BULLETIN

A four page illustrated bulletin is available from Miehle Printing Press & Mfg. Co. Printed in black, gray, red and yellow color, the bulletin is descriptive of Miehle 61 and 76 offset presses. For a copy, please circle No. 321 on the Reply Postcard.

SMALL HARRIS PRESSES

Three illustrated bulletins printed in color are descriptive of Harris single color offset presses. Covered are Harris 23 in. by 30 in. press with feed roll registering system. Another bulletin is descriptive of the Harris 17½ in. by 22½ in. press. The third bulletin contains information about the Harris 23 in. by 30 in. offset press equipped with tumbler gripper register. Floor plan dimensions in diagrammatic form together with specifications are given. For copies, please circle No. 322 on the Reply Postcard.

SHEET CLEANERS

Doyle sheet cleaners are the subject of a bulletin released by the J. E. Doyle Co. Doyle sheet cleaners are said to allow full production quality printing without stops for unnecessary washups. For a copy, please circle No. 323 on the Reply Postcard.

ROP COLOR REGISTER

Hurletron Color Register Control for ROP color is fully illustrated in Electric Eye Equipment Co.'s booklet. Feature of the automatic control, such as the Auto-Register pushbutton operation, are described. For a copy, please circle No. 324 on the Reply Postcard

Mailing Room

MAILROOM EVALUATOR

In a six page bulletin, Wiretyer Corporation provides a means for you to check your present mailroom operation against automatic operation. A list of 16 points to be checked together with a leaf on which to write your answers are provided. Each of the points to be checked is explained. By comparing the proper operating condition of each point you can then enter the efficiency of your mailroom on the score sheet. For a copy, please circle No. 325 on the Reply Postcard.

Miscellaneous

BETTER IMPRESSIONS

The Mead Corporation's fourth quarter issue of *Better Impressions* is available. In addition to showing uses of Mead Papers, there are some interesting typographical layouts and illustrations. For a copy, please circle No. 326 on the Reply Postcard.

MACHINE TOOL CATALOG

Machine tools manufactured by South Bend Lathe Co. are illustrated and described in an 80 page catalog. Lathes, vertical spindle milling machines, shapers, drill presses and pedestal grinders are included in the descriptions. For a copy, please circle No. 327 on Reply Postcard.

INDUSTRIAL HUMIDIFIERS

A well prepared bulletin consisting of 15 pages is descriptive of Aprilaire Industrial Humidifiers manufactured by Research Products Corp. The unit equipment is described. Specification sheets show how to secure proper humidification in the pressroom, bindery and stockroom. Constant relative humidity, filtered air and automatic control of humidifiers are discussed. Considerable data is given. For a copy, please circle No. 328 on the Reply Postcard.

PAPER STOCK DEMONSTRATION

A four color four page bulletin has been published by Oxford Paper Co. to demonstrate use of Wescar Satin Plate Offset paper stock. For a copy, please circle No. 329 on the Reply Postcard.

LEIMAN PRODUCTS

A 16 page catalog No. 1957 is descriptive of Leiman rotary positive air and vacuum pumps, gas boosters and air motors. Construction, dimensions, capacities, performance curves and installation details are given. An illustrated 16 page price list has also been published by Leiman Brothers, Inc. For copies, please circle No. 330 on the Reply Postcard.

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ROYAL ZENITH 29

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OFFSET PRESS

Presented by
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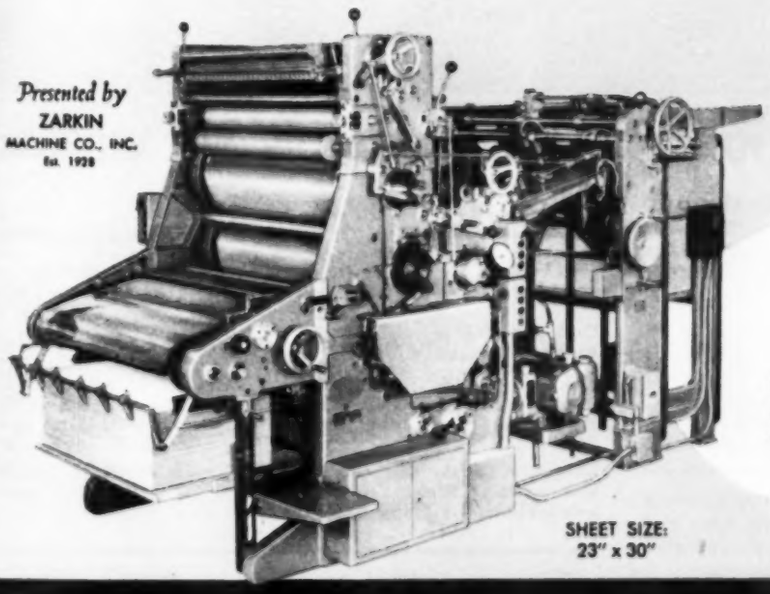

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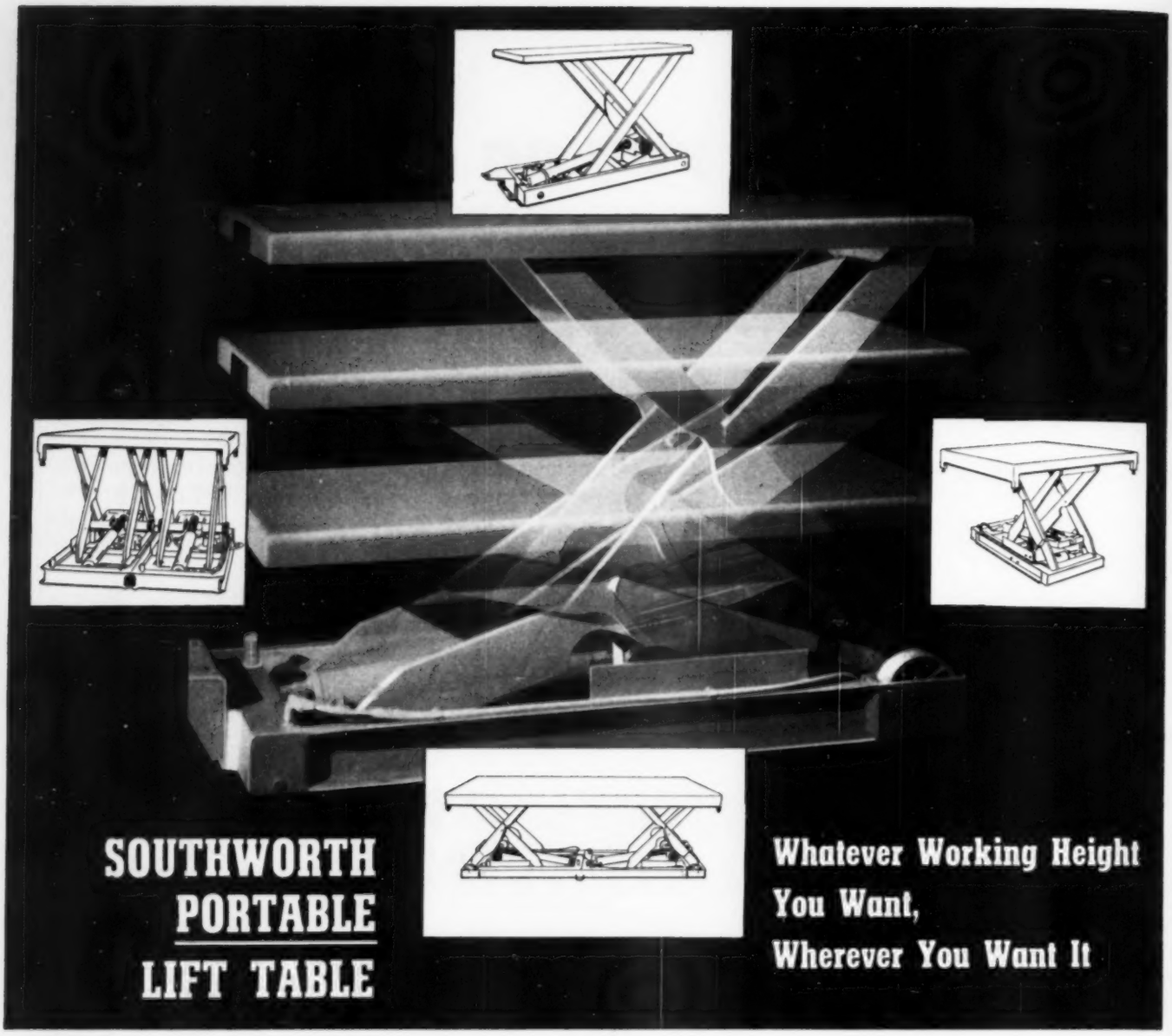

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Hundreds of installations now attest to the cost cutting advantages of this new type of Lift Table that can slide under skids, raise loads in a single or in several stages, give free access to work from all angles at all times . . . *and* be easily relocated.

Paper mills, printers and lithographers — users large and small in fact — have found the Southworth helpful in speeding up sorting, inspection and other finishing operations, as well as at more obvious cutter, trimmer or press positions. But in widening its application, higher rises, different load ratings, and various platform sizes were often found desirable.

As a result of requests, therefore, several additional basic models are now available . . . models, like the new 2000 lb. unit, which are possibly more suitable for *your* specific requirements.

BASIC SPECIFICATIONS

Capacities	2000 lb.	4000 lb.	8000 lb.
Platform Size	19½" x 53"	24" x 53"	24" x 106" 48" x 53"
Collapsed Height	6"	7¼"	7¼"
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Controls . . . . . Foot or Hand Switch
Motors . ½ H.P. single phase 115 volt AC 60 cycle 1725 RPM.
Hydraulics . . . . . pump actuated ram with relief and solenoid valves.

Larger, or special purpose, platforms available on all standard models. Higher rises (35", 40", 45" and 50") also available in a variety of capacities.

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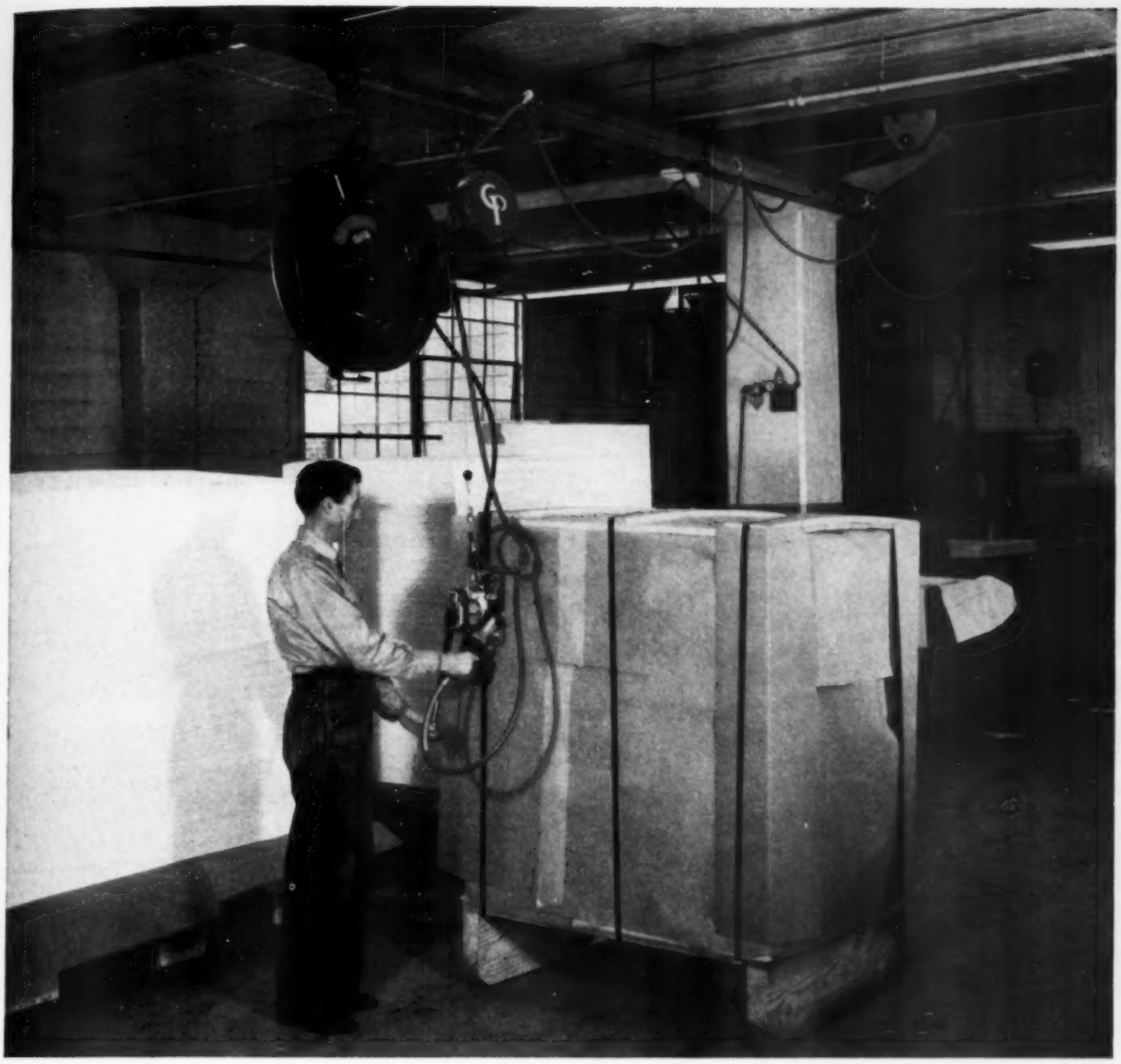
ELIMINATE FATIGUE • REDUCE HANDLING TIME • INCREASE PRODUCTION

For More Information Circle 129 on Reader Service Card



Fast new way to strap paper skids

Strapping paper skids is fast and easy with a setup like this. The bridge crane gives mobility to the strapping equipment, and obstruction-free working space on the floor. Signode's new AP-34 air-powered strapping machine applies strap almost effortlessly, in seconds. This Signode design setup makes skid strapping a much more efficient and easy operation. It saves important time and, in addition, frees valuable floor space. A Signode field engineer will be glad to work with you to develop complete strapping stations in your plant, tailored to your needs. Let him help you save time and money now. Write:

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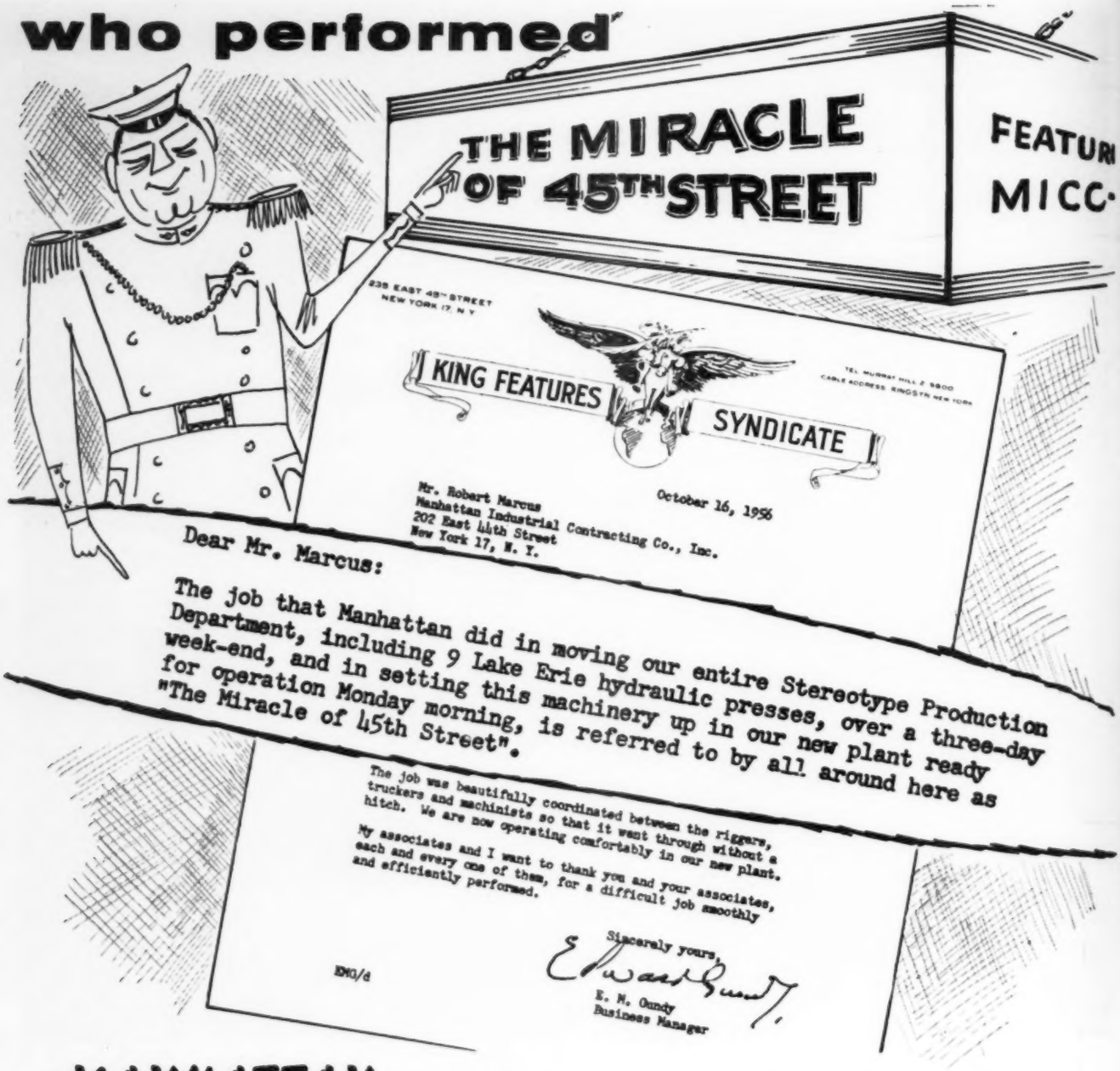
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CABLE ADDRESS: KINGSYN NEW YORK
October 16, 1956
Mr. Robert Marcus
Manhattan Industrial Contracting Co., Inc.
202 East 44th Street
New York 17, N. Y.
Dear Mr. Marcus:
The job that Manhattan did in moving our entire Stereotype Production Department, including 9 Lake Erie hydraulic presses, over a three-day week-end, and in setting this machinery up in our new plant ready for operation Monday morning, is referred to by all around here as "The Miracle of 45th Street".
The job was beautifully coordinated between the riggers, truckers and machinists so that it went through without a hitch. We are now operating comfortably in our new plant.
My associates and I want to thank you and your associates, each and every one of them, for a difficult job smoothly and efficiently performed.
Sincerely yours,
E. N. Gundy
Business Manager
END/d

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the Robert I. MARCUS* organization

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"A year of the unique convenience and economy of the Scan-A-Sizer has sold us 100% on this new machine. And it functions with all the reliability we've come to depend on in the time-proven Scan-A-Graver models."

● For full information on the Scan-A-Sizer, address Fairchild Graphic Equipment, Inc., 88-06 Van Wyck Expressway, Jamaica, N. Y., Dept. 100-43E.

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Electronic Engraving Machines

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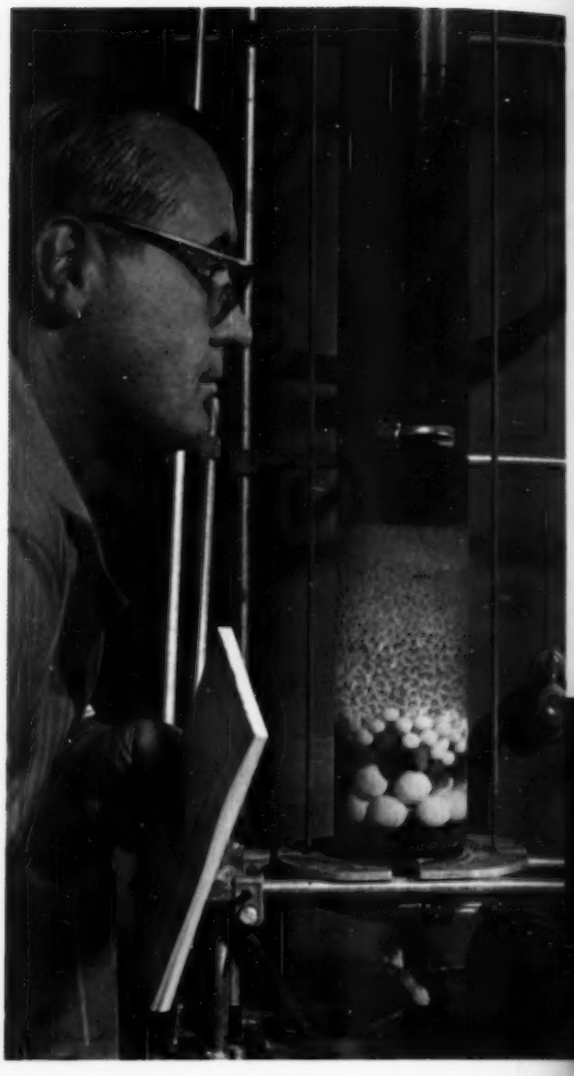
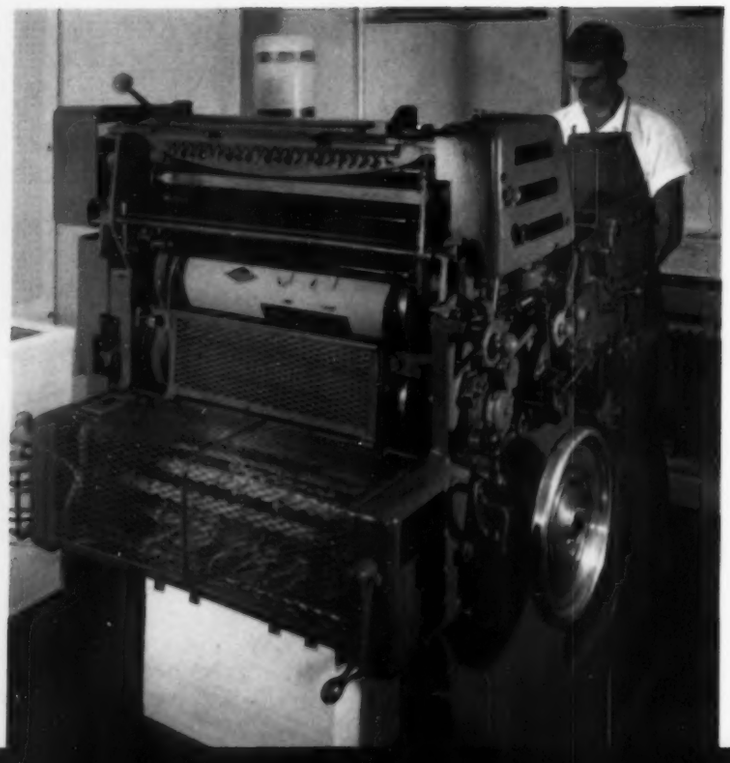
For More Information Circle 48 on Reader Service Card

For More Information Circle 64 on Reader Service Card

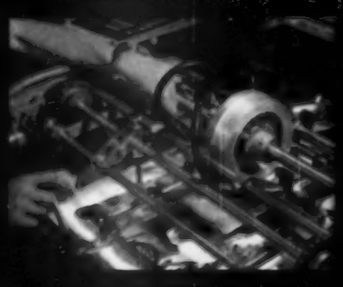
What's going on at HARRIS...



Developing new chemicals for lithography, Harris researchers use laboratory-size ion-exchange column. In manufacturing litho-chemicals, Harris uses 12-foot columns to make gum arabic of extreme purity.



Changing the habits of a lifetime in many letterpress shops, the new Harris 14½ x 20½" brings profitable, high-grade lithography into the small job-press field. Fast makeready features include quick-set piling guides, convenient table-trimmings unit.



Setting new records for volume paper trimming, 100″ Seybold full-hydraulic spacer-trimmer is biggest cutter in the business. Here is the first one at work in one of the South's largest kraft mills.

Growing 10% a year for past six years, the use of lithography for carton printing continues to increase. This five-color, double-delivery, 52½ x 77″ Harris is latest addition to all-offset pressroom of Rochester Folding Box Co., Rochester, N.Y.

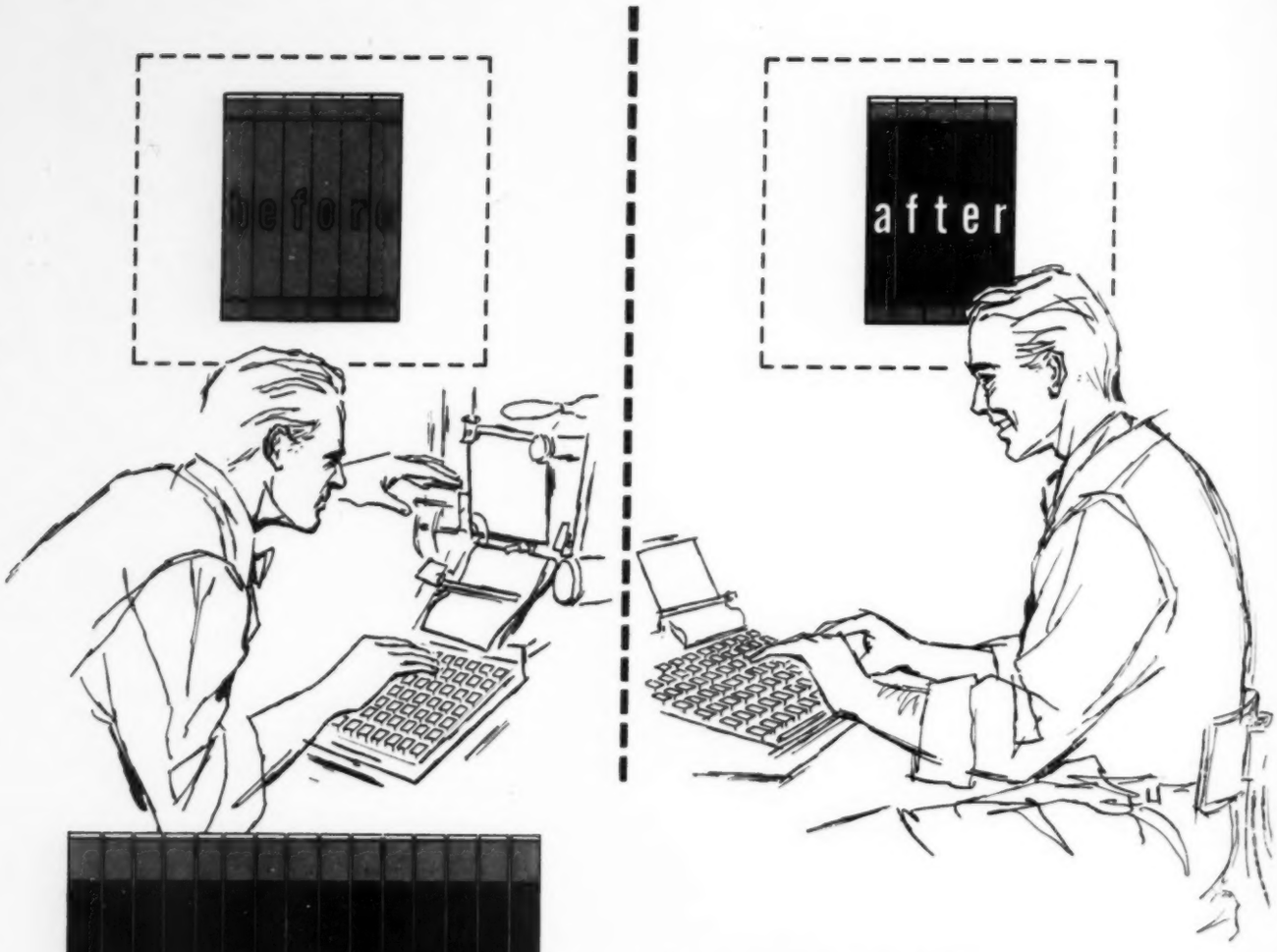
HARRIS-SEYBOLD COMPANY

. . . for your printing profits

General Offices: 4510 East 71st Street, Cleveland 5, Ohio

HARRIS SEYBOLD COMPANY

Harris Presses
Cottrell Presses
Seybold Cutters
Macey Collators
Harris Chemicals
Alum-O-Lith Plates
Special Products



MATRIX CONTRAST makes the difference

When Matrix Contrast Service takes over the maintenance of your black-and-white and colored matrix reference marks, the machine operators can throw away their aspirin and bifocals.

Instead of dreading "railroaded" news, your editors can be confident that the type will be set more accu*rately*, as well as quickly. And your readers will be pleasantly surprised by the reduction in "typos".

Actual on-the-job tests prove that Matrix Contrast Service cuts mechanical errors in "railroaded" copy by as much as 50%! This is not surprising when you stop to think that one wrong line can make it necessary to reset a complete paragraph.

Even on routine typesetting, *legible* reference marks make a big difference. To give you an example . . . one linecaster in a plant that had just contracted for Matrix Contrast Service set 3300 lines of *legal* advertising, casting four slugs from each line, and bet the foreman that he would have less than five errors! (P.S. He won the bet — having made only three errors!)

If you would like to cut down on machine errors and lost production time in your shop, why not check with us? We would be glad to give you the name of a newspaper or printing plant in your area using Matrix Contrast Service . . . and you can see for yourself how it improves operator efficiency and morale.

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MATRIX CONTRAST CORPORATION

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For More Information Circle 91 on Reader Service Card

PRINTING
EQUIPMENT
Engineer
March 1957

Paint its importance in relation to Lighting

By FRANCIS A. WESTBROOK

The amount of light in foot-candles required to give the best results for various operations in the production departments of printing plants has been pretty well standardized. But it must be borne in mind that installations made without due regard to the color and texture of the surfaces by which the light will be reflected run the risk of being inefficient and unsatisfactory.

When a fixture is designed to give 80 foot-candles of illumination over a specified area, for instance, the color and texture of the painted surfaces must be taken into consideration. The reason is that dark colors of low light reflectance will "soak up" some of light emitted by the fixture. If the surface is too glossy or bright it will cause glare so that in many situations it is necessary to use paint with a flat or low sheen finish that will diffuse the light and help distribute it evenly throughout the working area.

IES Recommendations

In general, the Illuminating Engineering Society recommends the following reflectance values, or factors, for industrial plants:

Ceilings	80%
Walls	60%
Machines and equipment	25 - 30%
Trim colors	40%
Desk and bench tops	35%
Floors not less than	15%

Of course, in specific locations these figures may be subject to considerable variation, depending on the kind of work carried on. The more critical and sustained the seeing task, the higher the level of illumination required.

Supplementary or localized lighting is also extremely important as in the case of linecomposing machine operation and in photoengraving and offset platemaking departments, and in many instances in the pressroom where pressmen must inspect sheets and for getting inside the press when making ready.

Here again, proper painting is necessary to reflect and diffuse the supplementary lighting to provide good illumination of the working areas. However, supplementary lighting must be planned in connection with the general lighting so that the contrast between the two will not be so great as to interfere with quick and comfortable eye adjustment from one type of illumination to the other. For instance, in the General Electric Co.'s folder on Light and Interior Finishes, it is pointed out that the ratio of brightness between a working area and the general background illumination should usual-

(All photos courtesy Illuminating Engineering Society)

Fig. 1—View in commercial section of Antelope Valley *Ledger-Gazette*, Lancaster, Calif. General lighting is provided by two-lamp 96 in. Slimline units with eggcrate louvers and upward component. Fixtures are mounted in rows 12 ft. apart to provide illumination of 50 foot-candles.

Fig. 2—Interesting pressroom lighting in plant of Portland (Ore.) *Journal*. It was necessary, in this case, to provide three levels of illumination—general, localized general lighting and above and below the pressmen's platforms.

ly not be greater than three to one. The Illuminating Engineering Society specifies five to one.

In a treatise on ***Engineered Color, Partner of Light in the Creation of Good Seeing and Working Conditions***, by Everett B. Nelson, Color Engineer of the Barreled Sunlight Paint Co., it is pointed out that each light source, such as the different types of fluorescent and filament lamps commonly used, has its own characteristic color. This strongly affects the apparent color of painted surfaces under it, and, consequently, the paint colors used should be selected according to the color of the illuminant.

One of Westbrook's Last Articles

The accompanying article was prepared by Francis A. Westbrook before his passing last November. Westbrook wrote for *Printing Equipment Engineer* over a long period of time. We have two more articles prepared by him which will be published in early issues. His technical contributions will be missed by many.

Ceiling Reflectance

Ceilings and other overhead structural members are the most important in reflecting and distributing light. White paint reflects much more light than any color and reduces the contrast in brightness with overhead light sources. This is especially true with the modern direct fluorescent fixtures which throw most, if not all, of their light downwards and can be a serious cause of eye strain and fatigue when seen against colored or dirty ceilings. If other than white is used it should have a reflectance value of approx. 80% and should be a light tint of the color of the wall or one which constrasts softly with it Reflectance value charts for different colors are available from the Lamp Department of General Electric Co., the Illuminating Engineering Society and various paint manufacturers.

As Nelson points out, flat or eggshell finishes are usually preferable for ceilings to diffuse and evenly distribute the reflected light. But in situations where dirt collects rapidly and periodic washing is necessary, a gloss or semi-gloss surface is preferable.

Dado Treatment

The lower wall up to 3 ft. to one-third of the total wall height is frequently painted a darker color than the upper wall so that dirt will not show, but it should have a reflectance value of at least 20% to 25%. Since it is below the eye level, this dado or wainscot can have a full gloss finish to facilitate washing as any resulting glare would not be tiring. The modern trend is to keep the color of the dado as light as possible without unduly increasing the cleaning necessary for good housekeeping.

Above the dado the upper wall may, as set forth in Nelson's treatise, be pure white as it is a great aid in improving the quantity and quality of the lighting. This is particularly recommended where large vertical machine surfaces call for horizontally delivered illumination, as in pressrooms.

White upper walls are also desirable where the wall areas consist of narrow strips between windows to avoid a disturbing contrast in brightness between wall and window areas. A semi-gloss finish is excellent for the upper wall finish as it provides an easily washable surface without glare. Posts and columns are treated similarly to the walls.

(*Continued on Page* 109)

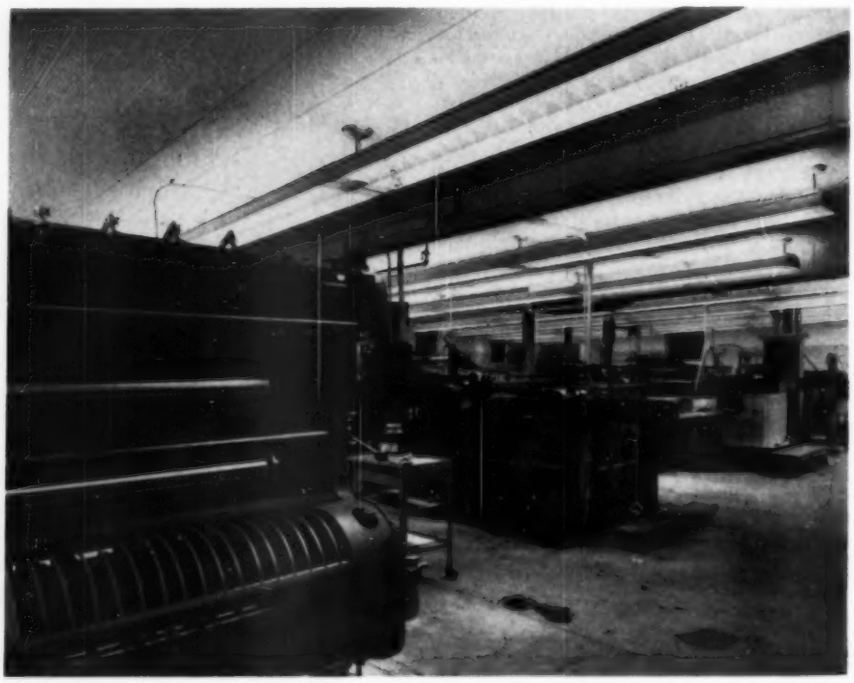


Fig. 3—View in pressroom of Sayers Printing Co., St. Louis, Mo. Direct-indirect luminaires are equipped with de luxe lamps and provide (in this case) 50 footcandles of illumination. The luminaires are shielded by louvers.

Mr. Plant Manager: Is yours a 4% profit commercial printing company? If it is, here are some helpful suggestions for raising the annual profit margin

Plant Planning—

Key To Better Profits

By RALPH D. HOLMSTEN*
**PIA Technical Director. Abstract of address delivered before Printing Industry of America convention, Hotel Statler, Los Angeles, November 1956.*

Each printer must take a second look at his operation and pick up all the loose ends to eliminate waste, both labor and material. He must do this with a fine tooth comb and question every detail. The man who comes to an early conclusion that nothing more can be done is giving up too quickly. Such analyzing must be thorough and all searching.

In plant planning, management should set up the objectives or goals for the plant as a whole. These are overall plant standards and should be made according to a time schedule.

Some of you are planning a new building and should consider the following:

(1) Can large trucks be placed at the dock for servicing in a minimum of time?

(2) Does the site adjoin a railroad siding?

(3) Can railroad tracks be arranged to run into the building?

(4) What about parking facilities?

(5) Is the area serviced with good restaurants?

(6) Is the site large enough for a phenomenal growth of the company?

(7) What are the predictions of growth of adjacent areas?

(8) Will your site be hemmed in by competitive trucking operations?

(9) Will your site be hemmed in by growing residential areas demanding a curtailment of manufacturing operations?

(10) What about bus transportation?

These are some of the problems that become continual headaches if precautions are not taken at an early stage of new plant planning.

Raw Materials Receipt

One area to analyze is plant layout. Let's start with the receiving of raw materials, such as paper, ink, solvents, glues, chemicals, film, machinery, spare parts, building materials, steel, bronze, electrical and plumbing supplies, and so forth.

The use of dock levelators and telescopic belt car loaders, and the proper selection and use of platform and fork trucks help solve the problems. The proper amount of load space, ahead of shipping and after receiving, allows for quick handling of street trucks in and out of the plant.

When quantities are heavy, naphtha, kerosene and paraffin oil tanks may be placed underground. Pumps, sinks, and controls can be placed at proper locations to allow for large bulk deliveries and fast, low cost handling to the pressroom floor with a minimum of congestion.

The handling and storage of these materials must be analyzed and a layout made according to late practices of mechanization and a short direct route from receiving to plant departments.

Material control considers three characteristics: Usage, availability, and low cost buying quantity. The plant space for materials is based on these three characteristics to establish maximum and minimum quantities for stock items, plus area and facilities for job items.

The receiving department might also do the shipping and, therefore, be located with adjacent or combined facilities of truck and railroad platforms for either over-the-road or rail service. Consider running the tracks into the warehouse for better working conditions for the shipping and receiving crews.

Coldest Place on Earth

The shipping dock, out in the weather, is the coldest place on earth, and the efficiency of operations in cold weather is proportional to the height of the mercury in the thermometer. In old plants, having outside operations, consideration should be given to using telescopic or accordion Weathertite hallways from outside doors to freight car doors. The

Magnificent Gift — The Supreme Council of the Knights of Columbus, headed by Supreme Knight Luke E. Hart, has donated two Cottrell rotary color magazine presses to the Catholic Hierarchy of Bolivia, South America. These presses were replaced by new Cottrell presses in the new million dollar plant of *Columbia*, the national monthly magazine for the family, New Haven, Conn. *Columbia* is rated as the largest Catholic magazine in the world, with over a million copies monthly. Here are shown some of the 56 crates, weighing over 125 T., being loaded in the Grace Line ship *Santa Elisa*, Hudson River, N. Y. Final destination of the presses is La Paz, capital of Bolivia, S.A. General Mgr. Wm. H. Porter tells *Printing Equipment Engineer* these presses will be used to help offset the great amount of Communistic literature being circulated in South America.

freight car is then a part of the plant, sealed off from the weather. These expanding hallways must be quickly operated by motor to be practical.

The operations of receiving should not interfere with the operations of shipping, nor limit what can be done in each phase of the two operations. Sometimes the truck or freight car emptied of goods received, can be loaded with completed work to be shipped to the customer.

I have seen a few plants with inadequate receiving and shipping dock space, causing a congestion of several blocks of trucks waiting to get into the docks for unloading or loading. Fast loading and unloading operations are musts for crowded dock conditions.

Plant facilities should provide for a quality control center, near the receiving dock, to allow for sampling and testing plant materials used in printing and binding.

Material in Process

Another place to analyze for better methods and profits is the handling of material in process. Can distances be shortened between operations by rearranging for better layout? Can the layout be improved to reduce double handling due to lack of process storage near the operations?

Sometimes, increased storage space can be realized by increasing the use of aerial space. In some instances, a second layer of loads can be gained by using platforms and two-by-fours with fork trucks in place of the use of skids.

A second look must be taken of the present equipment as to output, compared to later improved design with increased output. Looking at activity figures and expected future demand from increased sales, how quickly can the new equipment be paid for out of increased earnings?

Five Color Album Cover is being inspected at Princeton Polychrome Press, Princeton, N. J. Pressroom Supt. C. Russell Gudknecht, jr. (left) checks the run on Princeton's Harris 14 in. by 20 in. offset press, with pressman Fred H. Humes. Gudknecht reported that in one day 24,000 impressions of this job were run with elapsed time 7¼ hrs. including washup and makeready. Company also operates a Harris 17 in. by 22 in. and has another Harris 14 in. by 20 in. on order.

Science moves forward slowly, but always forward. Some of the things which we can foresee are developments in the photographic field to reduce costs in color process work and more stable film to replace glass with its difficulty in handling and storage.

Printing plates will be made of lighter materials, of metals — lighter metals—and plastics, to simplify the process and increase quality of printing. Lighter plates with tension lockup will permit higher press speeds.

In the near future, the Dow deep etch process will handle combination forms with fine line screen. Methods analysis, with a view toward mechanization, can be profitably made for repeat hand operations. Belt conveyers taking books from one operation to another require pileoff labor when delays occur in the second machine, not able to keep up with the first machine. A carousel or endless chain conveyer used to replace the belt conveyer eliminates the pileoff labor by allowing the books to make another circuit.

Decrease Labor and Material Waster

The biggest reason for a night shift is the greater use of plant facilities to get increased production without building additional plant and buying additional equipment.

Each printer must analyze every element of operation for a better way to decrease labor and material waste to increase profits. New plant construction may cost $11 per sq. ft. Every square foot of area realized from a better layout may be a saving of $11 per sq. ft. of new plant, providing enough area is saved to forestall new plant construction. Space thus saved may also decrease the handling costs because of greater efficiency from consolidation.

Plant planning for equipment requirements should be done with the basic idea in mind of providing a backlog of work ahead of each operation, to challenge the worker to keep up with his supply of work and thus increase output. Thus, provision should be made for sufficient process storage to make this idea practical.

The solution of this idea involves a study of operation production and will involve the balancing of equipment with scheduling to produce the desired result. Flexibility in starting operations at various times requires crews to operate other jobs when required.

Plant planning for higher profits requires a second look at all operations for better methods to reduce costs. If a plant now operates at a profit of 4%, it can, with a little overall plant cost reduction, double the profit picture.

Printing Equipment Engineer will help you find where 'tis made.

"Just when are we getting an automatic suction feeder on this press?"

Building Progress

In The Graphic Arts Industry

How many different kinds of Graphic Arts businesses solved new building problems are told in the following 24 page section. There are ideas on:

- **Arranging Equipment**
- **Workflow Routes**
- **Department Locations**
- **Building Sizes**
- **New Equipment**
- **Materials Handling**
- **Lighting, Flooring**
- **Air Conditioning**
- **Building Materials**

INDEX TO THE 31 COMPANIES PRESENTED IN THIS SECTION

Alabama Engraving Co., Birmingham
American Bank Stationery Co., Baltimore
American Business Systems, Phila.
Bangor (Me.) *Daily News*
W. M. Brown & Son, Inc., Richmond, Va.
Cadillac Color Plate Co., Detroit
Camden (N.J.) *Courier-Post*
Christian Printing Co., Durham, N.C.
Delaware Engraving & Lithograph Co., Muncie, Ind.
Eau Claire Book & Stationery Co., Eau Claire, Wis.
Gary (Ind.) *Post-Tribune*
Gulf Printing Co., Houston, Tex.
The Thos. P. Henry Co., Detroit
Intaglio-Cadillac, Inc., Detroit
Kerr Printers, Culver City, Calif.
Lawhead Press, Inc., Athens, O.
McKnight & McKnight Publishing Co., Bloomington, Ill.
McWhirter Co., Kansas City, Mo.
Magill-Weinsheimer Co., Lincolnwood, Ill.
Marinette (Wis.) *Eagle-Star*
Newburgh-Beacon (N.Y.) *News*
Obenchain Printing Co., Denver, Col.
Padgett Printing & Lithographing Co., Dallas, Tex.
The Poultryman, Vineland, N.J.
Sarasota (Fla.) *Herald-Tribune*
Sault Ste. Marie (Mich.) *Evening News*
Shafer & Feld, Inc., Minneapolis
H. M. Smyth Co., St. Paul
The Steck Company, Austin, Tex.
Titusville (Pa.) *Herald*
N. S. Yaffe Printing Co., Omaha

New Look in Gulf Printing Co.'s Building

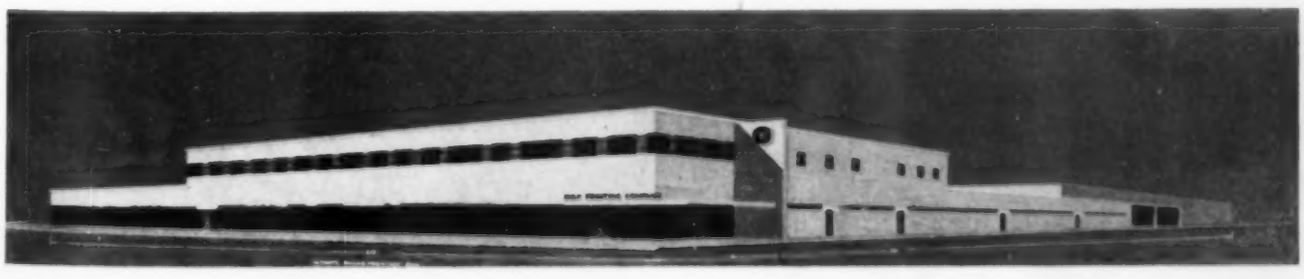
The building for Gulf Printing Co., 2210 Dallas Ave., Houston, Tex., will have a new look in the fall of 1957. A new building addition will add 93,000 sq. ft., making a total of 135,000 sq. ft. of floor space. Cost of addition will be approx. $950 thousand. Wyatt Hedrick is the architect.

Gulf Printing Co. prints telephone directories for 12 cities in five states, also employee publications and annual reports for many larger corporations.

Exterior of the new two story building will be buff glazed tile with dark brown trim. More than 75,000 sq. ft. of the new addition will be air conditioned.

Chairman of the Board Ray L. Dudley stated that more than $235 thousand worth of new equipment will be installed. Two new two-color presses and a one-color press will augment the present 22 letterpresses and the three offset presses now in use. New bindery, composing room and offset platemaking equipment also has been ordered.

The company employs about 250 people. Doran Miller is plant superintendent.



Plans New Plant with Aid of Templates

Planning the equipment layout for the new $500 thousand plant of Thos. P. Henry Co., Detroit advertising typographers, was accomplished through the use of a scale floor plan and cardboard templates cut to scale size of the equipment. This month's front cover of *Printing Equipment Engineer* shows Thos. P. Henry, president of the company, working with the scale model floor plan which was revamped a number of times over the planning period of several years. The present arrangement is shown in the floor plan on the opposite page. A front view of the new plant is at top of page.

Now in its 50th year of operation, the Henry company offers line slug and individual type composition, phototypesetting and presswork among its services to ad agencies and printers. The new plant provides 50% more working area for the company's 125 employees than was the case in the previous location. There is 3000 sq. ft. of office space, 12,000 sq. ft. of production area, and 7500 sq. ft. of basement storage space. The structural design of the building provides a minimum of waste space.

A study of the floor plan of the Henry plant shows that the saw-trimmers (No. 35) have been concentrated in three separate locations in the composing room. This necessitates having the worker walk from his work top to the saws when he needs to trim material. The Henry company plan-

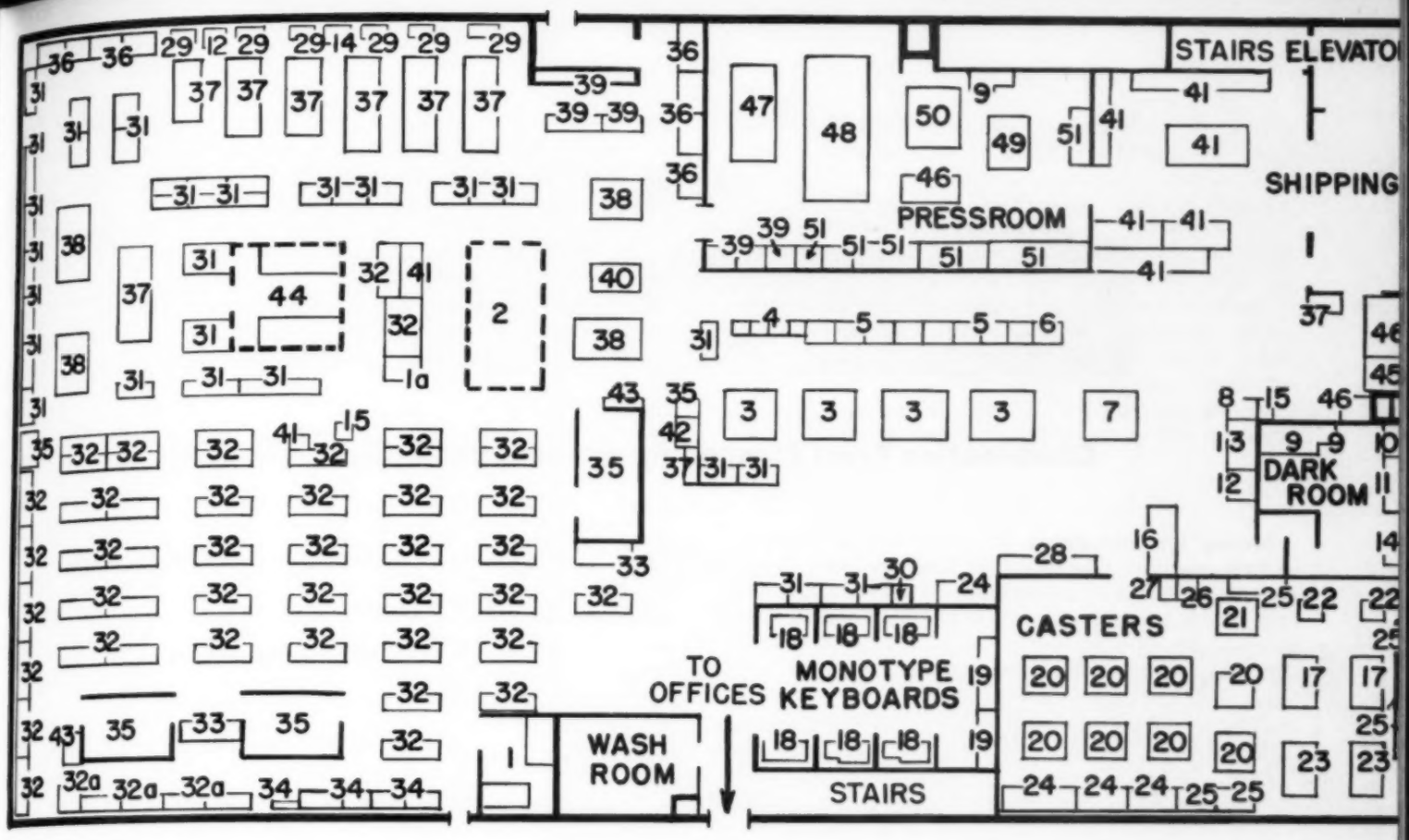
Interior Views of Thos. P. Henry Co., Detroit

1—Production scheduling and control, and order taking operations are performed by this group at this telephone service desk located within the plant. The desk is so designed that job jackets are within convenient reach of the servicemen by means of a filing arrangement behind the workers.

2—Four Intertype linecasting machines and a Fotosetter phototypesetting machine (at far end) are shown in this view. The company entered the photocomposition field in 1949.

3—A view of the composing room showing the enclosed arrangement provided for proofreaders which allows some degree of privacy. Central location of the readers helps speed copy OKs. Adequate aisle widths for movement of workers and material are also noticeable.

4—The Monotype keyboard room is equipped with acoustical paneled booths surrounding the operators. The department is equipped with six keyboards, 15 casting machines and 325 matrix cases.



Floor Plan Equipment Layout, Thos. P. Henry Co., Detroit

1—Supt.'s Office
1a—Foreman's Desk
2—Production Scheduling and Control Area
3—Intertypes
4—Matrix Cabinets
5—Magazine Racks
6—Fotosetter Magazine Rack
7—Fotosetter
8—Potdevin Waxer
9—Sinks
10—Contact Printer
11—Film Cabinet
12—Light Tables
13—Ozalid
14—Driers
15—Drinking Fountain
16—Stripping Table
17—Material Makers
18—Monotype Keyboards
19—Keybar Racks
20—Monotype Composition Casters
21—Sorts Caster
22—Thompson Casters
23—Giant Casters
24—Work Benches
25—Storage Cabinets
26—Router
27—Keybar Cleaner
28—Monotype Dump
29—Proof Paper
30—Burnisher
31—Galley Racks
32—Work Tops
32a—Sorts Racks
33—Material Cabinets
34—Spacing Material Bins
35—Saw-trimmers
36—Page Storage
37—Proof Presses
38—Imposing Tables
39—Chase Racks
40—Furniture Cabinet
41—Cut Cabinets
42—Low Quadder
43—Miterer
44—Proofreaders
45—Scales
46—Tables

Pressroom

47—C Kelly Press
48—No. 2 Kelly Press
49—Job Press
50—Paper Cutter
51—Storage Cabinets

ners may have felt this would have a relaxing effect on the worker who is confined to one spot during his shift.

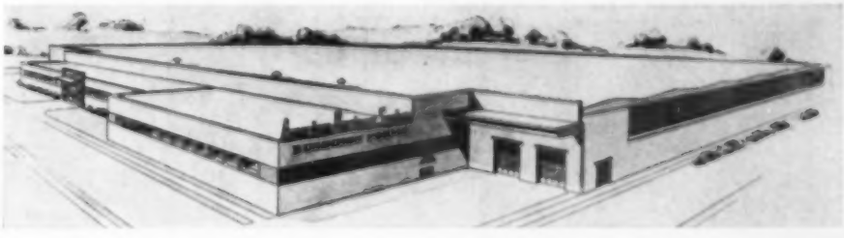
Some of the interesting features of the new building include: Air conditioning of both office and plant areas; acoustical ceiling panels to reduce noise in production departments; lighting which maintains an average of 175 foot-candles illumination on working surfaces 30 in. from the floor; and wood block flooring for workers' foot comfort. Employee parking has been provided for in a paved parking area adjacent to the plant.

The building has been designed so that all wiring and plumbing is placed under the floor with convenient power connections for machinery. This provides a plant with no exposed pipes or wiring in the main production areas.

The basement of the building provides space for heating and air conditioning equipment, lunch and locker rooms, and storage area.

Completes $1/2 Million Plant Addition

American Business Systems, manufacturers, creators and designers of business forms, has completed a $500 thousand addition to its modern four-year-old $1 million plant located in the northeast part of Philadelphia. The plant comprises 75,000 sq. ft. of space and is equipped with modern, high speed presses. ABS currently employs about 150 persons. An artist's sketch of the new facilities of American Business Systems is shown below.



Combination Plant Planned for Present and Future

Among the new plants to swing into production in new quarters this month is The Lawhead Press, Athens, O. This is a combination letterpress-offset firm which prints a number of publications as well as a variety of commercial work. Lawhead, which is managed by P. F. Good together with his two sons, Peter and John, now occupies a 122 ft. by 140 ft. modern building (shown above in its final stages) comprising a total of 17,080 sq. ft. of floor area.

Sound planning for present and future production requirements has accompanied the move. For example, the company maintains a policy of installing modern high-speed equipment whenever it becomes necessary to do so. In line with this policy, Lawhead has installed a new 22 in. by 28 in. Miller (SW) press, 31 in. by 46 in. Baum folder, and es-

Equipment Layout and Workflow Lines at The Lawhead Press Athens, O.

Composing Room

1—Superintendent's Desk
2—Linotype Machines
3—Ludlow
4—Ludlow Matrices
5—Elrod
6—Work Tops
7—Proof Presses
8—Proofreaders
9—Vandercook Lite-Base Mounting Dept.

Pressroom

10—C & P Press
11—Miehle Verticals
12—21 in. by 28. Miller (SW) Press
13—Miller Major (SY) Presses
14—ATF No. 2 Kelly Press
15—Air Compressor

Offset Dept.

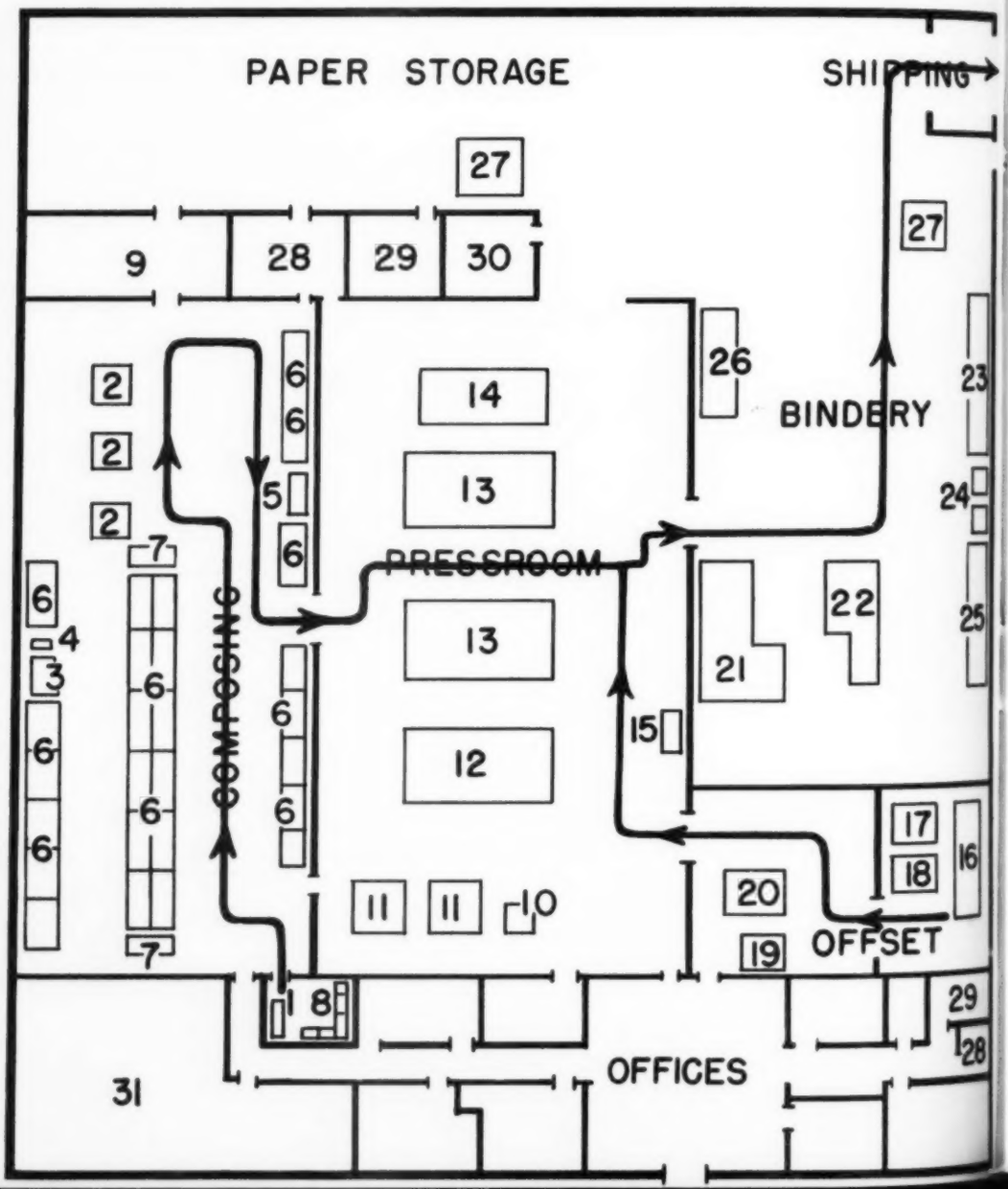
16—Robertson Camera
17—ATF Whirler
18—Macbeth Arc Lamp
19—Davidson Press
20—17½ in. by 22½ in. Harris Offset Press

Bindery

21—31 in. by 46 in. Baum Folder
22—22 in. by 28 in. Baum Folder
23—Rosback 6-station Gathering Machine
24—Stitchers
25—Gathering Machine
26—Addressing and Mailing Machine
27—Paper Cutters

Miscellaneous

28—Men's Toilets
29—Women's Toilets
30—Heating Equipment
31—Future Offices



tablished a separate department for Vandercook Lite-Base precision plate mounting equipment.

Future expansion is already in the minds of Lawhead's executives who have provided space in the new plant for this purpose. According to the senior Good, the area in the building which presently will be used for paper storage (see floor plan) can be utilized for enlargement of pressroom and bindery facilities. There is also provision for expanded office area (No. 31 in floor plan) which is presently being used for plate storage.

The new location affords close access to Lawhead's own paper warehouse which also houses the company's airplane used for speedy long distance deliveries and customer contact. The plant's construction consists of concrete block walls, brick front, steel decked roof and cement floors. There is provision for future installation of air conditioning units.

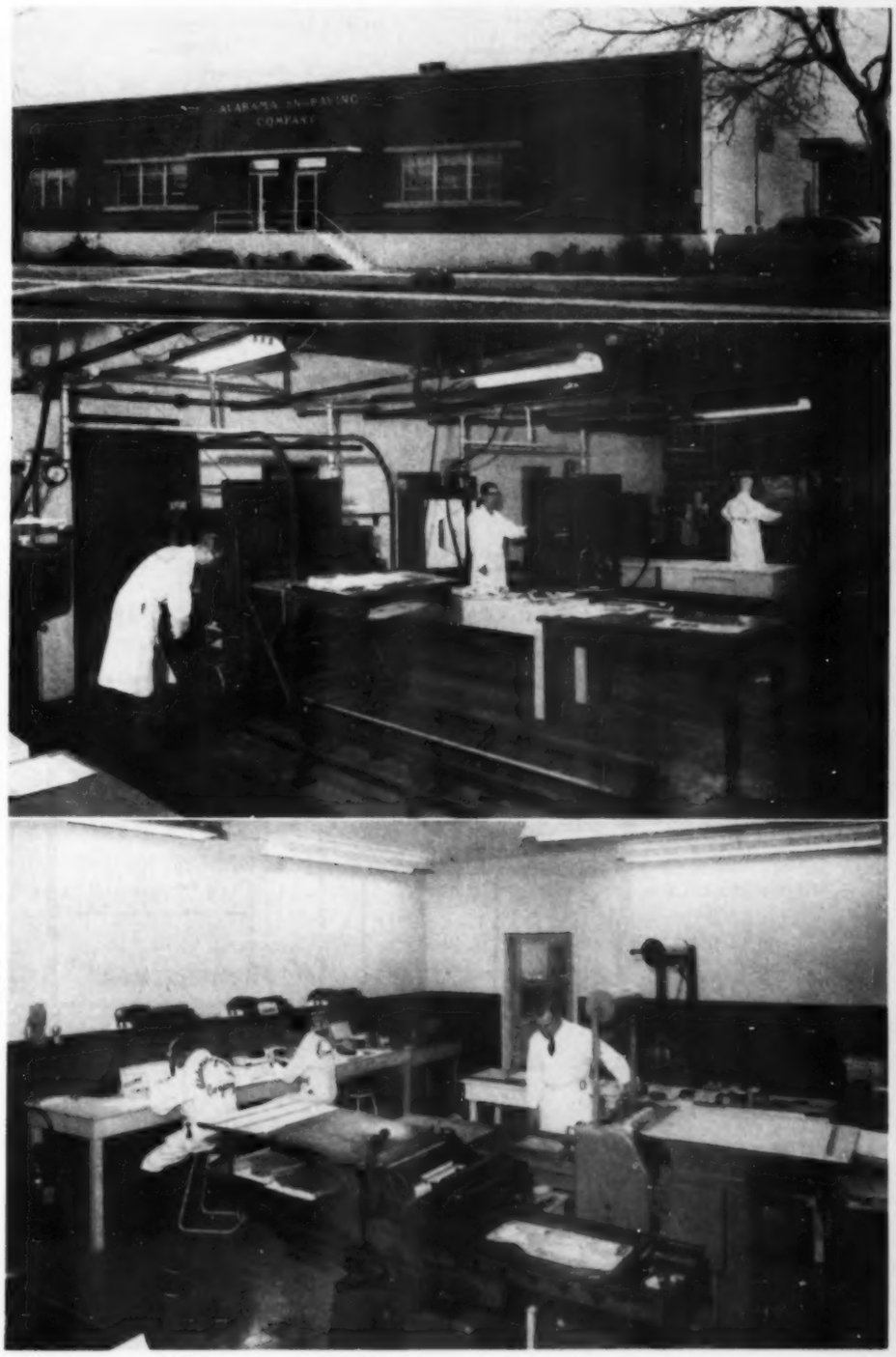
An exhaust hood over the delivery end of each press helps rid the plant of excess spray from the offset guns. Sufficient space has been allowed at the rear of the building to accommodate paper which is moved into the plant several days in advance of its use on the presses. This permits the paper to become acclimated to pressroom temperature in contrast to the temperature of the separate warehouse building.

Straight Workflow Speeds Production in Engraving Plant

Efficiency in photoengraving operations has been achieved by Alabama Engraving Co., Birmingham, Ala., by designing its new plant so that work follows a straight production line through the building. According to Roy D. Hickman, AEC president, the copy starts at the camera department and flows straight through the plant without doubling back until it reaches the finishing and proofing room.

The new building consists of 10,200 sq. ft. floor space. The company's art department, offices, finishing, proofing and machine rooms are air conditioned. The camera, stripping, and zinc and copper etching departments are air cooled. A 5000 sq. ft. parking area adjoins the building. The company, now in its 52nd year, has 30 employees.

Besides black and white and color photoengraving work, the Birmingham firm also offers an art service which handles layouts, printing dummies and photographic retouching.



Alabama Engraving Co.'s New Home

TOP—Front view of the building pictures spaciousness of the company's modern quarters.

CENTER — The camera department offers ample working area as well as an air cooled room.

BOTTOM—Good lighting and air conditioning are features of the plant's finishing and proofing department.

Completes 10 Year Planning Job

A 10 year task of preparation and planning for a new building was completely late last year by the Marinette (Wis.) *Eagle-Star* when it moved into the new home pictured here. The decade of planning led to 250 individual floor plans, many conferences with construction specialists and visits to other newspapers for obtaining the best arrangement for a modern one floor newspaper plant.

The building, with 14,700 sq. ft. of floor space, is equipped with two 16 ton air conditioning units for cooling composing, stereotype and office areas. The composing room is the largest in the building, 54½ ft. wide by 40 ft. deep. Like all other rooms, it was designed without a column or post. Wood block flooring has been uned in the composing room. Other mechanical departments are equipped with concrete floors with a green colored sealer. Fluorescent lighting has been selectively used throughout the building.

Floor Plan of the Marinette (Wis.) *Eagle-Star*

Composing Room

1—Machinist's Bench
2—Makeup Tables
3—Saw-trimmer
4—Correction Bank
5—Proof Presses
6—Ad Storage
7—Linecasting Machines
8—Ad Dump
9—Miterer
10—Saw-trimmer
11—Ad Assembly
12—Ad Markup
13—Ludlow Matrices
14—Ludlow
15—Table
16—Saw-trimmer
17—Slug Stripper
18—Elrod
19—Work Bench
20—Sink
21—Mat Storage
22—Mat Roller

Engraving

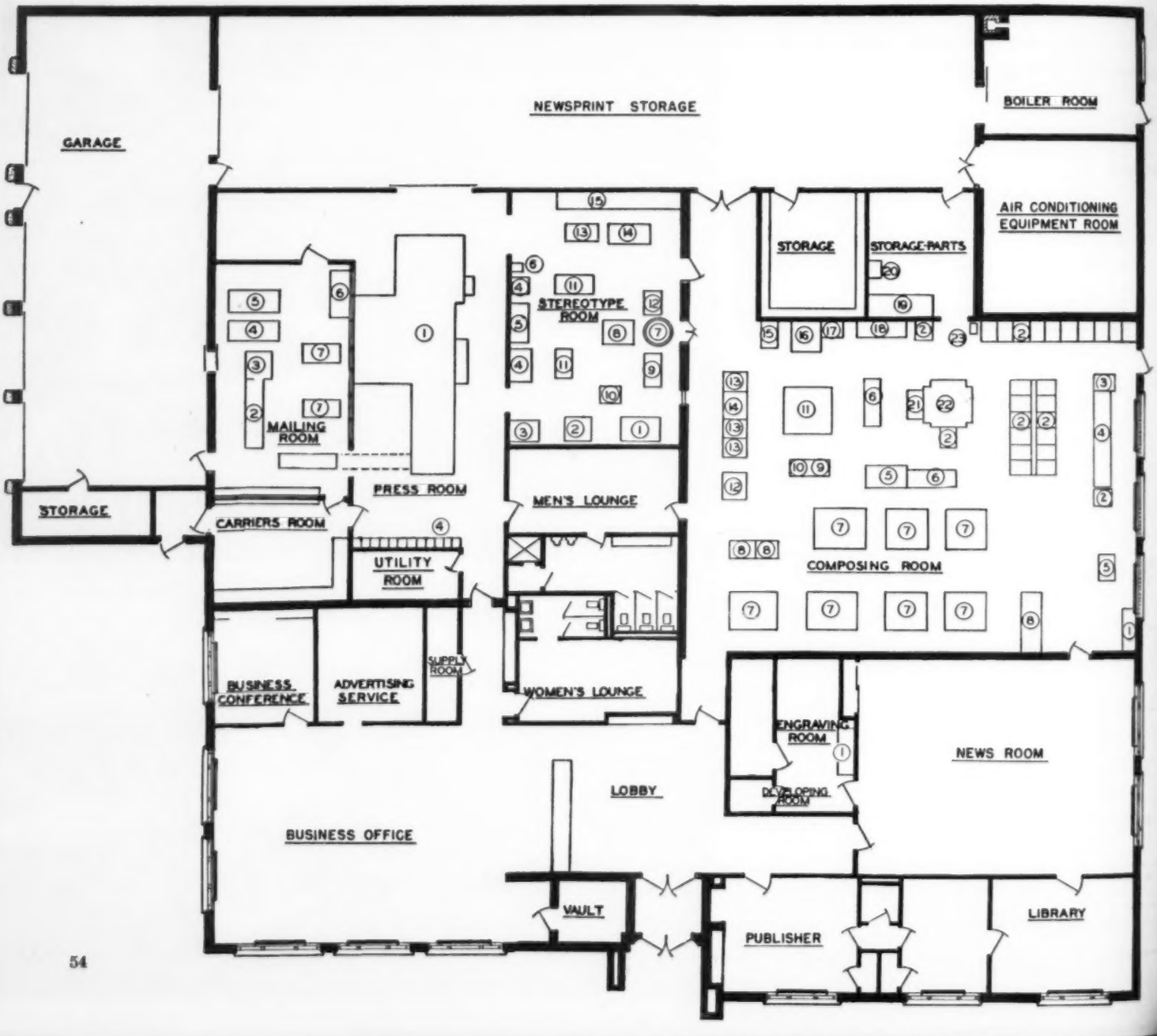
1—Fairchild Scan-A-Graver

Stereotype

1—Plate Shaver
2—Scorcher
3—Curved Plate Router
4—Saw
5—Planer
6—Saw
7—Metal Furnace
8—Flat Casting Box
9—Curved Casting Box
10—Chipping Block
11—Flat Cast Table
12—Pig Molds
13—Mat Trim Table
14—Mat Backing Table
15—Kemp Carbureters

Press and Mailing

1—Goss Rotary Press
2—Counting Table
3—Bundle Tyer
4—Mail Bag Rack
5—Wrapping Table
6—Graphotype and List Cabinet
7—Addressographs



3-D Scale Models Locate Equipment Positions Quickly

Three-dimensional equipment models continue to be used by some printers in planning equipment arrangements of new printing plants. The layout here shows the combination letterpress-offset plant of Shafer & Feld, Inc., Minneapolis, Minn. Below it is a view of the company's letterpress pressroom showing how the equipment was positioned in accordance with the model layout.

This particular layout was prepared by Paul J. Ocken, general manager, Graphic Arts Industry, Inc., for S. & F. The models are positioned on ¼ in. per ft. graph paper which quickly shows the space relationship between each piece of equipment, aisle widths, floor area of departments, etc. A U-shaped workflow is necessary in the S. & F. plant because both offices and shipping are located at front of building.

The building is air conditioned and is of fireproof construction. Principals of the S. & F. firm are Ben M. Feld, president, and Harry G. Shafer, secretary-treasurer.

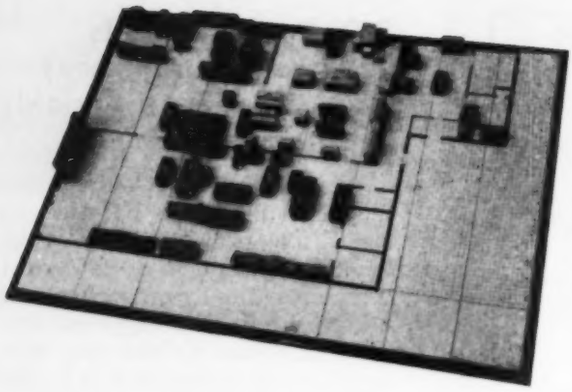
Newspaper Plant Designed for Easy Expansion

A building designed for operational flexibility and ease of expansion of every department has just been completed by Lindsay Newspapers, Inc., publishers of the Sarasota (Fla.) *Herald-Tribune* and *Journal*. Mechanical equipment is concentrated in a core area, as shown by the accompanying artist's sketch, and every department can be doubled in floor area without a change in the workflow pattern. All east walls in the plant are of the movable type and any expansion will be in that direction.

Glass, aluminum panels, Brickcrete and Cemesto materials have been used extensively in the steel frame curtain construction. Cost of the new facilities is said to be in excess of $1 million.

Four new Hoe press units have been installed to increase the newspapers' capacity to 18,000 64-page or 36,000 32-page papers per hour. An 80 ft. glass wall (shown in the illustration) will enable the public to watch the presses in action.

The roof of the building has supports for a heliport platform to be installed at a future date. The two-story structure has no front but has been designed to present a neat appearance in all directions. Principal production executives of the *Herald-Tribune* and *Journal* include: Herbert M. Pearson, pressroom superintendent; Allan Kistler, composing room superintendent; and George Bauer, business manager.



From this self-built scale model of Obenchain Printing Co., Denver, Colo., the floor plan below was drawn by architects. The equipment models are made of wood, painted different colors according to the department in which they belong, and labeled for identification.

Scale Model Becomes Architect's Blueprint

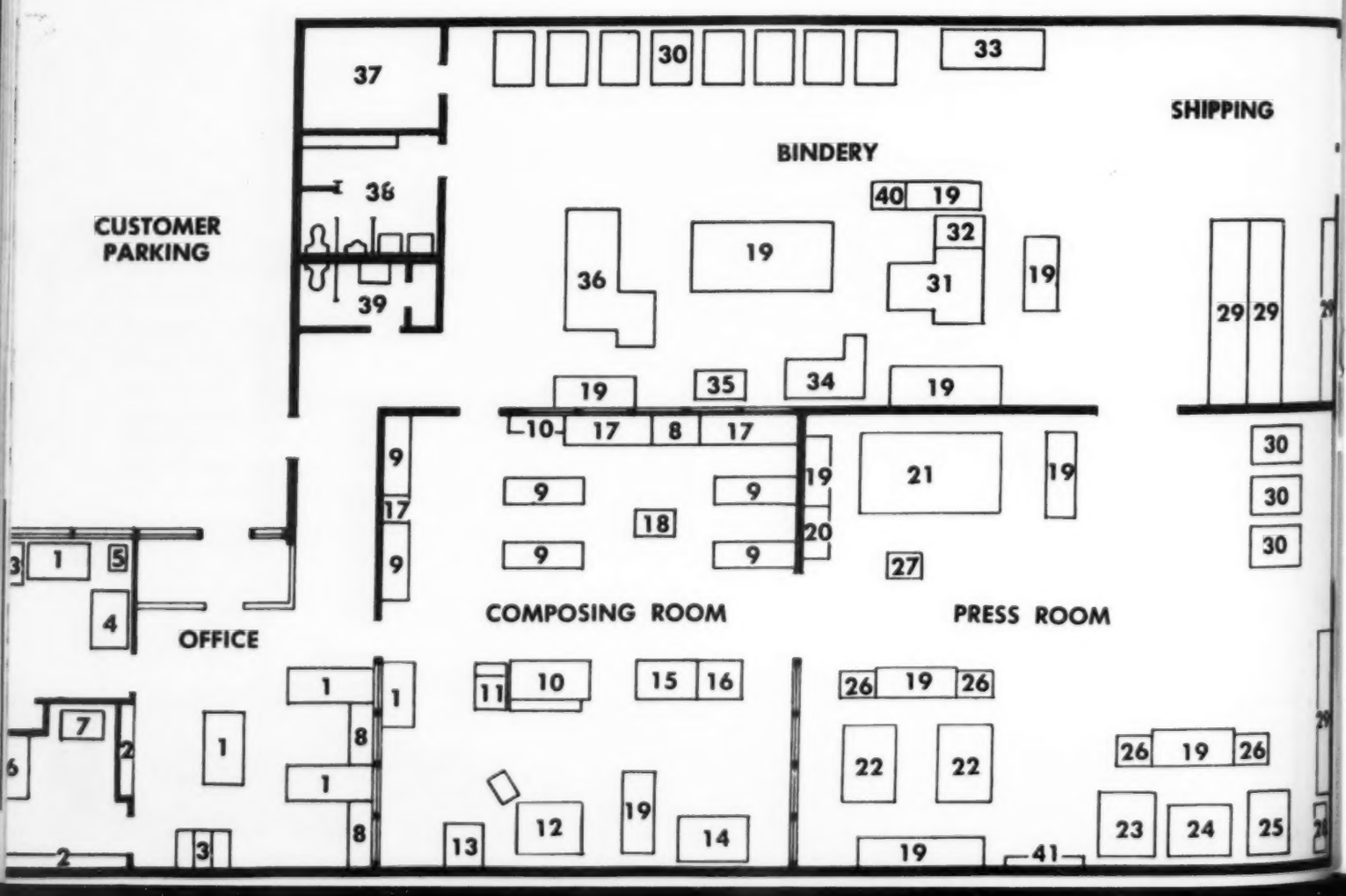
How one printer effectively used self-built scale models of his production equipment to show an architect what he wanted to achieve in equipment arrangement and workflow is told in the story of the newly-built $60 thousand plant of Obenchain Printing Co., Denver, Colo. Obenchain is an all-letterpress firm which produces a wide line of commercial printing.

The 26-year-old company is now located in a modern air conditioned building comprising 6000 sq. ft. The story of how it all happened follows. Obenchain officials first gave considerable thought to the location of their proposed new plant. Close access to downtown Denver was a requisite and a site within three minutes of the city's business center was chosen. Paper and ink companies are nearby which offers the advantage of quick deliveries. The location also provides quick access to an express highway soon slated for completion which will help speed customer deliveries.

Planning the arrangement began soon after the purchase of a 66½ ft. by 132 ft. plot of ground. Scale models (⅜ in. per ft.) were made from wood and, in some cases, fashioned to the shape of the equipment items they were to represent. The models were painted different colors according to the department in which they were to be placed and each was labeled for identification. Using

Floor Plan Equipment Layout of Obenchain Printing Co., Denver, Colo.

1—Desks
2—Job Tickets
3—Files
4—Layout Table
5—Light Table
6—Paper Samples
7—Heating Unit
8—Work Space
9—Type Cabinets
10—Galley Racks
11—Proof Press
12—Intertype Machine
13—Magazine Rack
14—Lineup Table
15—Imposing Table
16—Pre-register Table
17—Cut Storage
18—Saw
19—Work Tables
20—Sink
21—Heidelberg Cylinder Press
22—Miehle Vertical Presses
23—10 in. by 15 in. Job Press
24—Heidelberg Platen Press
25—10 in. by 15 in. Job Press
26—Stock Trucks
27—Makeready Cabinet
28—Compressor
29—Paper Stock
30—Skids
31—Paper Cutter
32—Waste Paper
33—Shipping Table
34—Stitcher
35—Perforator
36—Folding Machine
37—Storage
38—Men's Toilet
39—Women's Toilet
40—Paper Drill
41—Ink Cabinet



a Celotex board marked with the outlines of the building, L. W. and John F. Obenchain, father-son owners, together with Plant Supt. Pat Quaratino, moved the scale models around on the board until they were satisfied the best workflow had been achieved for production within the plant.

The architectural firm of Baume and Polivnick was then called in and shown the model. This, according to John F. Obenchain, provided the architects a blueprint from which to work. They proceeded to design an attractive building while maintaining the same relationship between departments and floor areas as shown by the model. Another requisite was to provide space on the plot for customer and employee parking.

The model was used again after the preliminary plans were submitted by the architects and the equipment models rearranged to examine workflow lines. Company officers found the production flow was improved over what was shown in the first arrangement. Twice more the model was used in drawing the final plans and to show the movers where each equipment item was to be located. Building construction was completed in four months; the actual move was performed in four days.

Some of the features of the one story building include: Brick and cinder block construction with concrete floors; pressroom exhaust system for removing excess offset spray; a lighting system which provides 100 ft. candles illumination at working heights; large picture windows between offices and all departments to provide customers a view of the company's equipment in operation; and an audio intercommunication system.

Overhead electrical connections permit machines to be moved and rewired quickly, as well as facilitate installation of new equipment. No equipment is bolted to the floor. Paper stock used on the platen presses has been located near these machines to eliminate as much handling as possible. The Miehle Vertical presses have been arranged with the operator's sides facing each other. A peg board wall in the offices is used to display specimens of the company's work. Interior walls have been painted a neutral beige which is combined with yellow, red and blue-green for accenting certain areas.

Views of Obenchain Printing Co.'s New Home

TOP—Front view of the newly-built $60,000 plant of Obenchain Printing Co., Denver, Colo. The building, located close to the downtown area, is of brick and cinder block construction.

CENTER—A section of Obenchain's composing room showing the large picture windows between this department and the offices. Idea is to provide visitors a view of the company's equipment in operation.

BOTTOM—Part of the pressroom showing the Miehle Verticals at left and the Heidelberg cylinder press at right. Noticeable here is the straight line workflow in the plant which begins at the offices in the far background and extends through the composing room into the pressroom.

Employees Plan New Building

Before starting plans for a new building, Joseph H. Sutton, president of Delaware Engraving & Litho Co., Inc., Muncie, Ind., instructed each foreman to call his men together for a conference. The idea was that, in turn, each foreman would discuss with employees amount of floor space needed in each department, as well as location of equipment necessary for excellent working conditions. The men were glad to participate. Then with added details by company executives the entire matter was disposed of satisfactorily.

The plant building is constructed of brick combined with steel and covers an area of 12,000 sq. ft. Cost of the building was $60 thousand. The building is situated on a 5 A. tract with plenty of parking space.

A complete photoengraving department is located at the front quarter of the building. Offices, conference and reception rooms take up the front space in the other quarter. Balance of the floor area consists of complete offset, phototypesetting, color separation and bindery departments. Supply rooms take up the remainder.

Other officers of the company are B. S. Hornaday, vice president and Robert Bell, who is in charge of sales.

Carefully Selects Materials for New Building

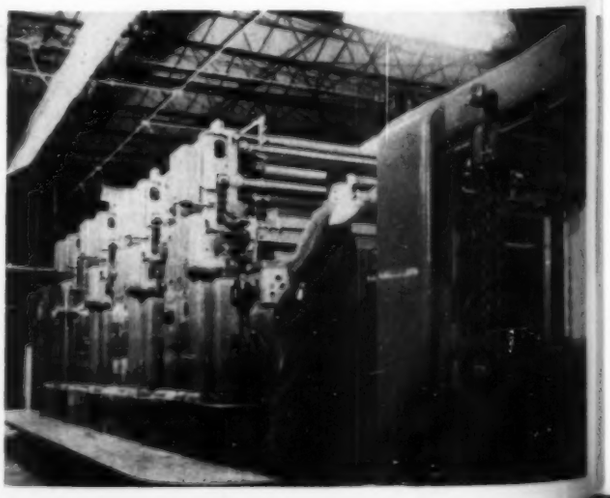
Careful design and selection of materials enabled Magill-Weinsheimer Co. to effect economies in construction costs and increase effective working space in its new Lincolnwood, Ill., plant. The modern plant is valued at $1.25 million, company officials report. Further, the company has 20% more effective work space in its new quarters, comprising 126,000 sq. ft., than it had in its former location, which totaled 187,000 sq. ft. The building exterior is of yellow face brick and Tennessee crab orchard stone with aluminum trim. The interior of the plant was decorated in 21 pastel colors to increase safety and morale and reduce visual fatigue. Architects and engineers were the Klefstad Engineering Co., Chicago, and Faber Birren of New York, N. Y., developed the master color plan for the building's interior.

Equipment of the plant is arranged in logical sequence to promote work efficiency. Paper and other supplies received at one side of the building are processed in straight line production and emerge from the opposite side as the finished product. (For the floor plan of the new Magill-Weinsheimer plant, see *Printing Equipment Engineer*, March, 1955, p. 51.)

Offices and the plate and offset departments are air conditioned and provision has been made for future conditioning of the remaining 60% of the plant. A major contribution was made to the economy of construction and efficiency of the heating and cooling systems by use of Fiberglas acoustical form board. It serves as the permanent form for the poured-in-place gypsum roof deck, as roof insulation and as an incombustible acoustical ceiling. Anning-Johnson Co., Inc., Chicago, was the roof deck contractor. Because of the high insulating values of the Fiberglas acoustical form board, Magill-Weinsheimer was able to reduce the capacity of its refrigeration system from 240 to 170 T. Engineers estimate a savings of up to $3600 a year on fuel for heating because of the installation of the Fiberglas insulation. Use of the form board makes possible a much quieter operation as the product absorbs most of the noise caused by the presses. A total of 2000 sq. ft. of insulating glass was installed in the area occupied by the art and design department which is faced to the North.

AT LEFT—Dot etching area of the plate department in the new Magill-Weinsheimer plant. All facilities from planning and artwork through finishing operations are available at the one company.

AT RIGHT—Much of the noise caused by this four-color, 76 in. offset press is absorbed by the Fiberglas acoustical form board which also serves as a permanent form for the roof deck and insulation.



Windowless Plant Aids Quality Control

H. M. Smyth Co., Inc., St. Paul, Minn., combination letterpress-offset printing firm, is now housed in another of the modern windowless plants designed and equipped for high quality control standards. The absence of windows in the production departments permits viewing work in progress under identical lighting conditions on both day and night shifts. The entire building is air conditioned and humidity controlled year around within the 48-52% r. h. range as another aid to controlling quality.

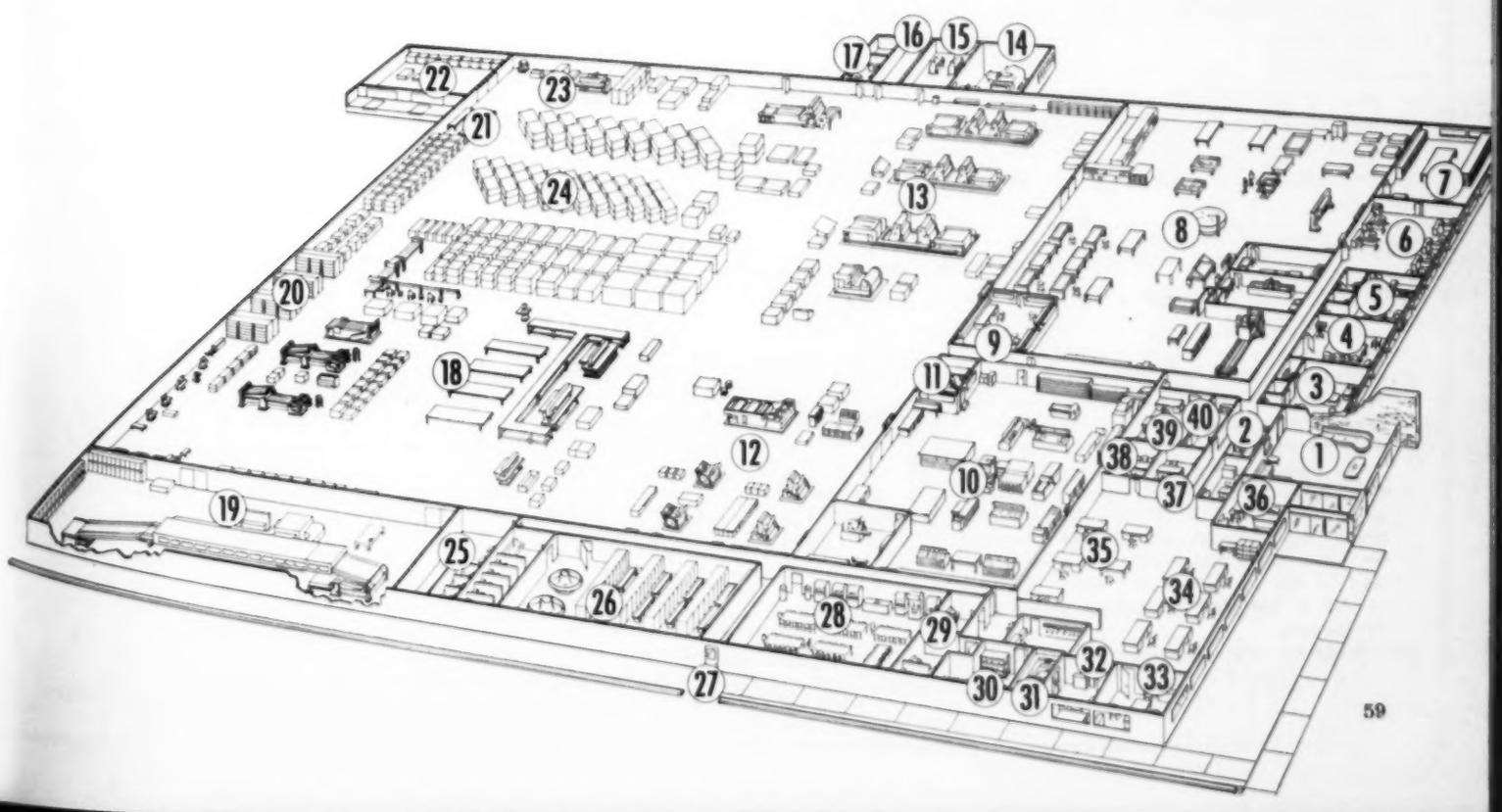
A front view of the new building consisting of 45,000 sq. ft. floor area, is shown above. Air conditioning is handled by a 225 T. Carrier unit. Included in the plant's new equipment is a Harris 42 in. by 58 in. two-color offset press and a McCain automatic three-knife trimmer attached to a Christensen stitcher. The company produces catalogs, magazines, labels, folders and general advertising material.

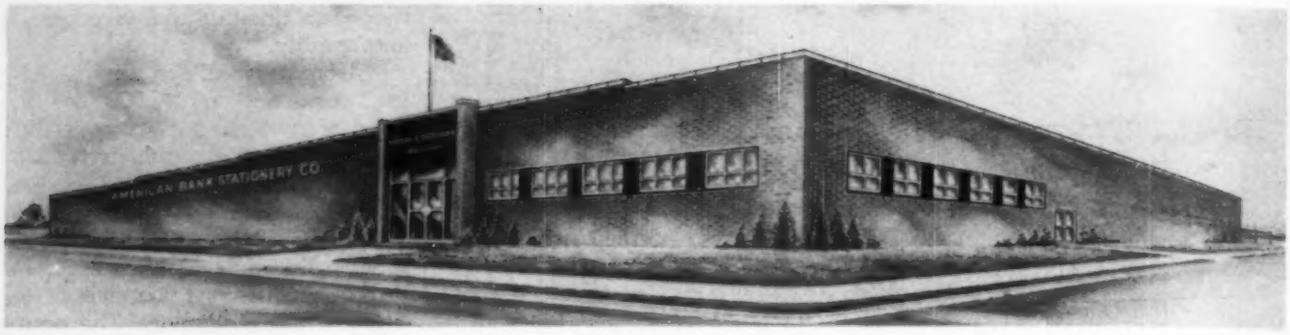
Below is an artist's rendition of the floor plan and equipment layout of the plant. No. 19 in the floor plan is a Chambers coating machine designed for applying spirit varnish, pyroxcote and special decorative and protective coatings on certain jobs. Gold bronzing and die cutting are other specialties offered by the Smyth firm.

Among the executives of the Smyth company are: W. J. Hickey, president; W. J. Hickey, jr., vice president and general manager; R. L. Bachmeier, controller; H. M. Werner, production manager; and Peter Patterson, production consultant.

Floor Plan of H. M. Smyth Co., Inc., St. Paul, Minn.

1—Lobby
2—Receptionist
3—President's Office
4—Conference Room
5—Art Director
6—Creative Art Dept.
7—Art and Negative Library
8—Platemaking Dept.
9—Litho Supt.
10—Composing Room
11—Letterpress Supt.
12—Letterpress Pressroom
13—Offset Pressroom
14—Boiler Room
15—Air Conditioning Units
16—Supply Room
17—Volatile Storage Room
18—Finishing Dept.
19—Coating Machine
20—Finished Stock Room
21—Shipping Dept.
22—Deck Area
23—Receiving Dept.
24—Raw Stock Storage
25—Women's Locker Room
26—Men's Locker Room
27—Employees' Entrance
28—Lunch Room
29—Office Wash Rooms
30—Office Storage
31—Vault
32—Accounting
33—Assistant Secretary
34—Secretarial and Clerical Dept.
35—Sales Dept.
36—Vice President
37—Sales Manager
38—W. J. Hickey Co.
39—Purchasing and Estimating
40—Paper Sample Room





Plant Engineering Team Accomplishes Planning Job

American Bank Stationery Co., Baltimore, Md., is moving this month into a new $750 thousand plant (see artist's sketch above) which has been designed to swiftly handle a large volume of bank stationery printing. The planning of the new quarters was accomplished by an engineering team consisting of E. H. Hanhart, consulting mechanical engineer; Thomas M. Sheridan, assistant to the president of ABS and a graduate industrial engineer; and T. M. Schmid, vice president and plant superintendent. How well they did their job follows.

The new ABS plant, one of the largest of its kind, will house under one roof equipment for offset and letterpress printing, steel die engraving, imprinting on checks and gold stamping. The Baltimore operation is the largest in the company's network of five plants.

The firm, which is in its 30th year, found that by 1955 its business had quadrupled in the previous five-year period. The increased volume pointed up the need for larger quarters and for consolidation of its manufacturing facilities which were scattered on several floors of two buildings. The 5 A. site chosen by the planners is three blocks from Baltimore's city limits alongside a railroad siding as well as auto access to a main highway.

The new building measures 270 ft. wide by 240 ft. deep, representing 64,800 sq. ft. of floor area. It features air conditioning throughout, dehumidification in the offset areas, a windowless plant area to reduce heat loss and provide economies in air conditioning, and Cemestos panelling across the rear of the building so that the structure may be expanded at a future date without extensive construction.

Scale templates were made by the engineering team to provide the best equipment layout (see floor plan, opposite page) as well as to study production flow lines (see explanation below). The plant is laid out on 30 ft. column centers so that any two of the company's largest pieces of equipment can be accommodated within one bay. The raw stock storage area was placed on the side of the building directly adjacent to the railroad siding in order to reduce moving time to a minimum.

The imprinting department was conveyorized to speed the flow of orders through the room. Heat lamps to dry the work were added to the delivery end of the imprinting presses. The personalized checks are placed on the conveyor belt which moves them forward to a gravity belt where they are inspected. They are then placed back on the conveyor belt which carries them to tables for packaging, weighing, postal inspection and labelling.

Included among the new machines installed in the plant are a Didde-Glaser Speed Klect collator, Rutherford photocomposing machine, stainless steel sinks, and a Brown plate whirler. Hydraulic ramps have been installed for speeding up truck loading and unloading operations at the rear of the building.

ABS' Production Follows Five Workflow Routes

Production routes through the various departments of American Bank Stationery Co. present an interesting study in how this large printing firm solved its workflow problems. Perhaps the most noticeable part of the company's floor plan layout on the opposite page is the central location in the building of the bindery. The workflow lines reveal why this was done.

The biggest part of the plant's production follows flow line A which begins in the paper warehouse, moves to the large offset presses, then into the bindery for the trimming operation and finally, direct through the plant to shipping. Line B flows from the small offset presses direct to the perforators (which process most of this production) and hence to shipping. The flow lines (A and B) from the platemaking department feed to the respective presses.

While the offset department is feeding work into two sides of the bindery, the letterpress department moves work in from the third side—line C. Much of this work entails finishing by the numerous bindery machines so consequently line C winds its way through the bindery and out to shipping. The composing room was centrally located, also, to feed composition from the line-casting machines direct to the letterpress pressroom as well as to the imprinting department.

Line D is the route followed for imprinting orders—mostly personalizing lithographed checks. It commences in the check storage area and flows through the department direct to shipping. Since steel die engraving requires but one operation and is then ready for shipment, this department was located adjacent to shipping to eliminate long movements of stock. Line E shows this workflow. In most cases, the work flows directly through the plant to shipping without any reversing.

Equipment Layout of American Bank Stationery Co., Baltimore, Md.

Composing Room

1—Foreman's Desk
2—Linotype Machines
3—Ludlow
4—Ludlow Cabinets
5—Type Cabinets
6—Saw-trimmers
7—Proof Presses
8—Proofreaders
9—Galley Racks

Letterpress Pressroom

10—Cut Storage
11—Imposing Table
12—Job Presses
13—Kelly Press
14—Craftsmen Press
15—Kluge Press
16—Miehle Press
17—Tables
18—Jogger

Platemaking

19—Foreman's Desk
20—Camera
21—Repeat Printer
22—Darkrooms
23—Photocomposing Machine
24—Directo Table
25—Stripping Tables
26—Vacuum Frame
27—Whirler
28—Plate Rack
29—Acid Bath
30—Developing Tank
31—Etching Sinks
32—Negative Cabinet

Offset Pressroom

33—Davidson Presses
34—Multilith Presses
35—Plate Storage
36—Paper Conditioner
37—Harris Presses
38—Tables, Cabinets, Racks, etc.
39—Jomac Roller Cleaner

Bindery

40—Foreman's Desk
41—Cutters
42—Perforators
43—Conveyor Tables
44—Folder
45—Paper Finishing Machines
46—Tipping Machines
47—Sewing Machines
48—Stitchers and Tables
49—Punches and Tables
50—Stripping Machine
51—Casing-in Machine
52—Gold Stamping Equipment

Steel Die Engraving

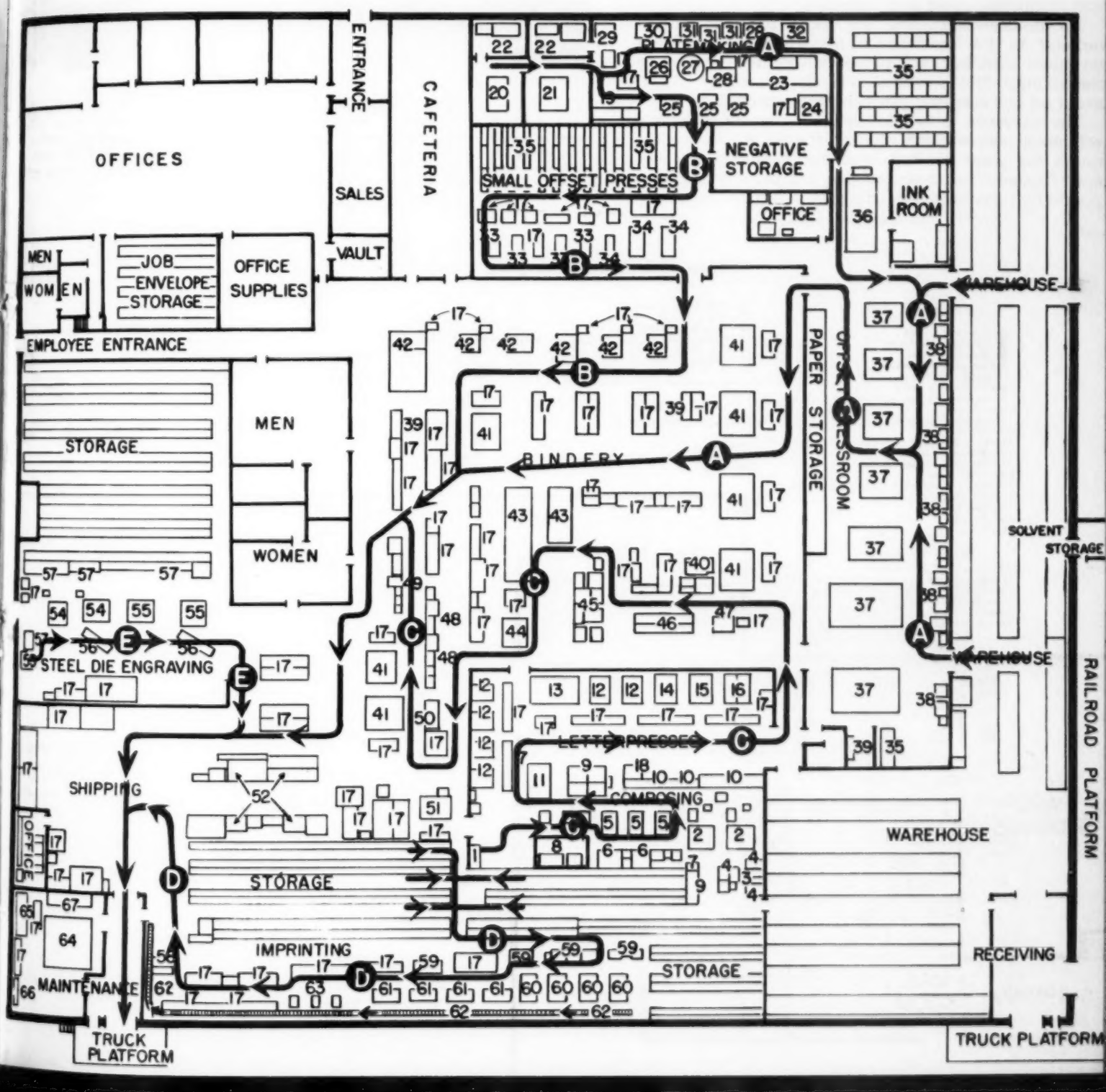
53—Foreman's Desk
54—Olney Presses
55—Carver Presses
56—Driers
57—Storage Cabinets

Imprinting

58—Foreman's Desk
59—Lockup Tables
60—Frishl Presses
61—McAdams Presses
62—Conveyor Belt
63—Inspection

Maintenance

64—Baler
65—Blade Grinder
66—Tools
67—Rag Storage



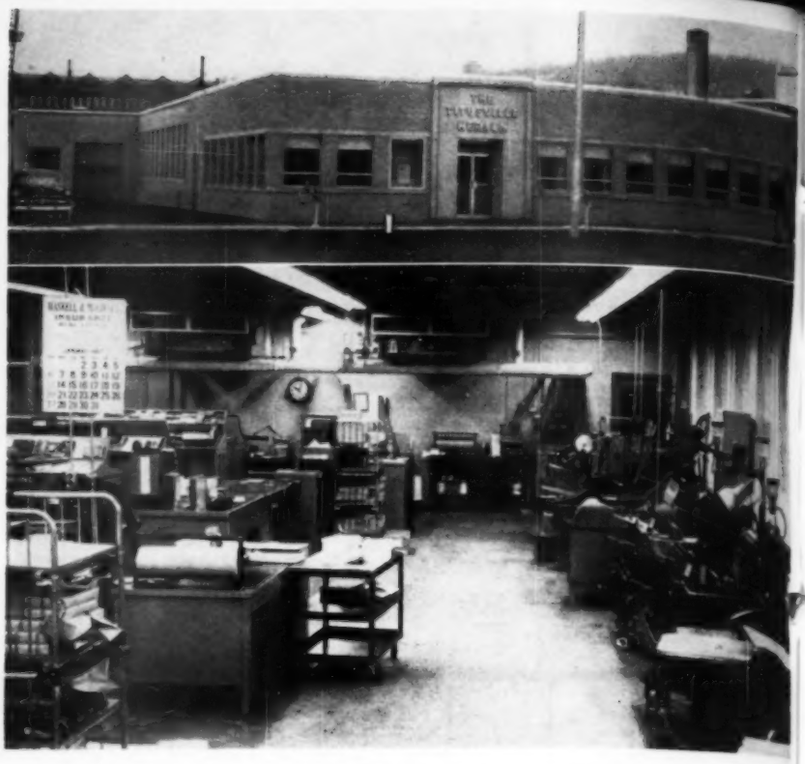
lewspaper and Commercial Plant In Tidy New Building Quarters

After 80 years in the same location, the Titusville 'a.) *Herald*, which was established in 1865, and its job rinting department, has settled in a new $175 thousand uilding. The one-floor structure is of steel and masonry, ompletely air conditioned and comprises 12,000 sq. ft. floor area.

Planning the equipment arrangement (see floor plan) as accomplished with the use of templates and engi- eering services were provided by Robert W. Dickerson, leveland architect. The job printing department and ewspaper composing room are heated and ventilated s one unit, but they are separated by a Cyclone fence ith gates which are locked at night. The reason for is is to isolate the job area at night when the news- aper composing room is in operation.

All utilities—electricity, gas and water—are carried verhead in the mechanical departments, permitting onvenient location of equipment as well as maintenance ccessibility. The electrical bus ducts provide 110 v. urrent on one side and 220 v. on the other side.

The omission of walls between the newspaper's echanical departments helps speed the workflow rough the plant as well as aiding foot traffic move- ent. Concrete floors are used in the plant proper and parking lot adjoins the building.



At top is a front view of the $175 thousand building in which are now housed the newspaper and commercial printing operations of the Titusville (Pa.) *Herald*. Lower picture shows a section of the job printing department at the *Herald* in which the Chandler & Price, Heidelberg, Multilith, Kluge and Miehle Vertical presses are visible at the right. A portion of the Cyclone fence, separating job department and newspaper composing room, is visible in upper left hand corner of the picture.

Floor Plan Layout of Titusville (Pa.) *Herald*

Composing Room

1—Foreman's Desk
2—Linotype Machines
3—Magazine Racks
4—Spaceband Machine
5—Parts Cabinets
6—Machinist's Desk
7—Machinist's Bench
8—Ludlow
9—Ludlow Matrices
10—Surfacer
11—Slug Stripper
12—Makeup Trucks
13—Material Storage Racks
14—Proof Presses
15—News Dump
16—Ad Makeup
17—Saw-trimmers
18—Storage
19—Elrod

Stereo Department

20—Hammond EasyKaster
21—Stereo Saw
22—Mat Roller
23—Flat Plate Shaver
24—Flat Scorcher
25—Guillotine
26—Mat Packing Table
27—Work Bench
28—Tubular Scorcher
29—Metal Furnace
30—Pig Mold
31—Chipping Blocks
32—Plate Finisher
33—Compresser

Pressroom

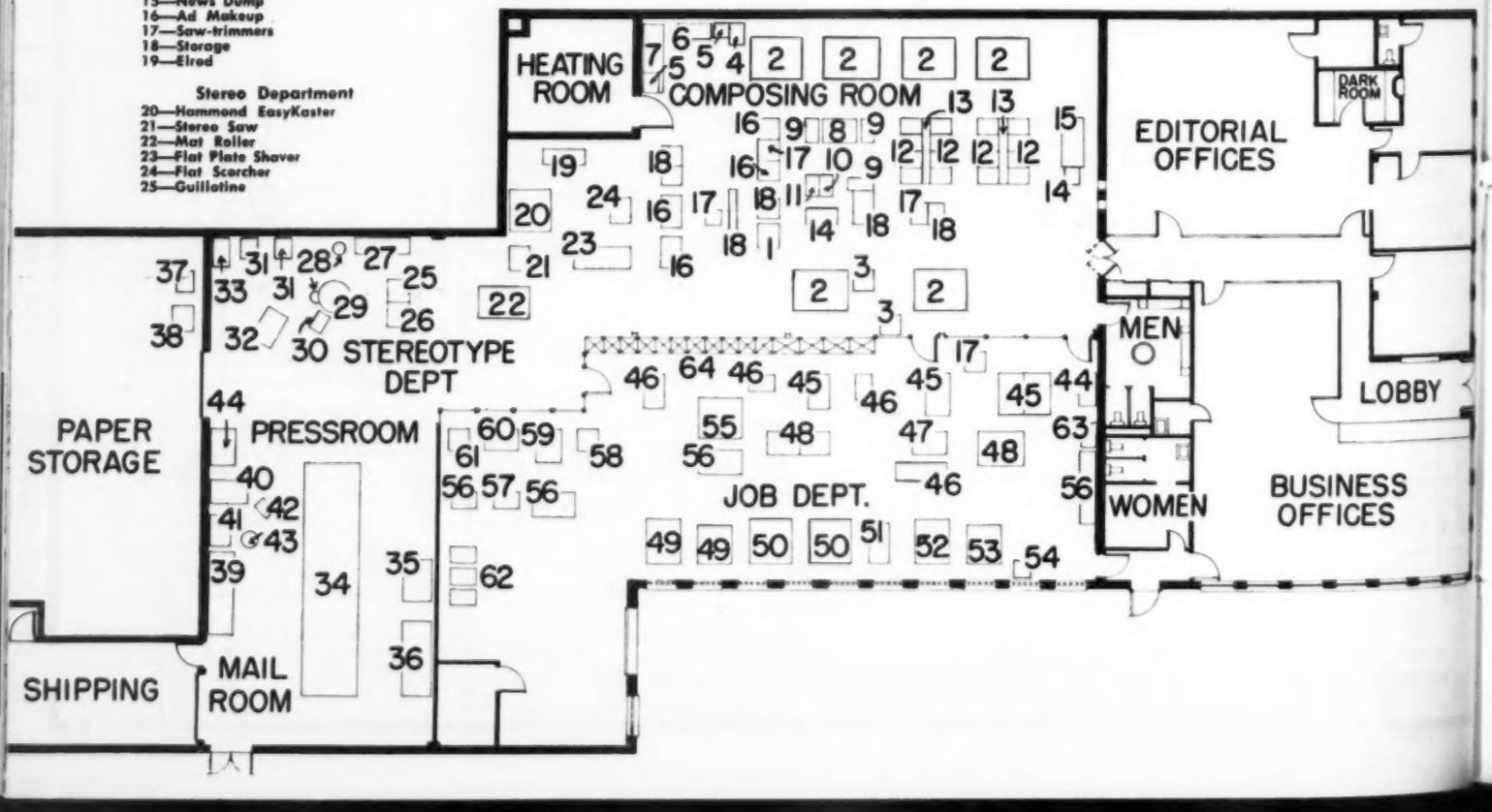
34—Duplex Tubular Press
35—Press Motor
36—Press Controls
37—Ink Tank
38—Baler

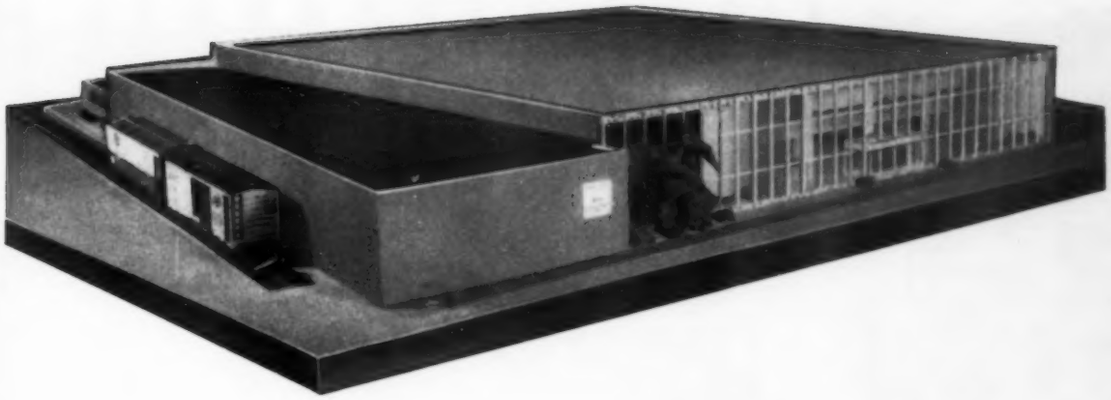
Mailroom

39—Mail Table
40—Speedaumat
41—Speedaumat Dump
42—Speedaumat Plate Cabinet
43—Graphotype
44—Single Wrapper

Job Department

44—Foreman's Desk
45—Work Tops
46—Storage Cabinets
47—Proof Press
48—Imposing Tables
49—C & P Presses
50—Heidelberg Presses
51—Multilith Press
52—Kluge Press
53—Miehle Vertical Press
54—Roller Cabinet
55—Paper Cutter
56—Work Tables
57—Gathering Rack
58—Paper Drill
59—Folding Machine
60—Perforator
61—Stitcher
62—Paper Storage
63—Sink
64—Storage Racks





Gary's New $3 Million Newspaper Plant

The Gary (Ind.) *Post-Tribune* expects to be in operation in its new $3 million plant by early fall of this year, according to Carl E. Kinney, production manager. The project includes the construction of a $1¾ million building (architect's model shown above) with a stainless steel and sun-deflecting glass front, installation of a new 8-unit Goss Headliner press and the addition of equipment for other mechanical departments.

The structure will cover an area of nearly 50,000 sq. ft. and will provide about 2½ A. of floor space. Building foundations will permit the addition of two more floors as the need arises. The new pressroom will extend from the basement to the roof, with a glass enclosed visitors' gallery on the second floor.

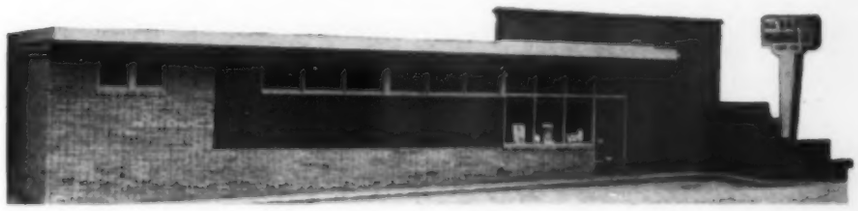
The new plant will be the result of nearly three years of planning during which newspaper plants in every section of the country were studied. George N. Hall, one of the building's architects, said the best ideas in all these plants were studied and wherever possible existing practices were improved upon before plans for the new *Post-Trib* building were put into blueprint form.

Adjoining the pressroom and located beside a railroad siding, will be a paper warehouse. Almost all of the basement will be used for paper storage, the entire storage capacity being 4500 T. The entire building will be sealed, except for the pressroom, to permit year-around functioning of the 190 T. capacity air conditioning system. The air conditioning will be provided by a series of units operating in various parts of the building. Location of these separate units in various areas of the structure will cut cumbersome duct work to a minimum, according to the architect. A special exhaust system is to be installed in the pressroom for fast air changes and to reduce ink misting.

One of the features of the building will be a modern cafeteria, capable of seating 100 persons at one time. A parking space for up to 45 vehicles will be provided on a paved lot at the rear of the building site.

Omaha Printery Doubles Floor Area

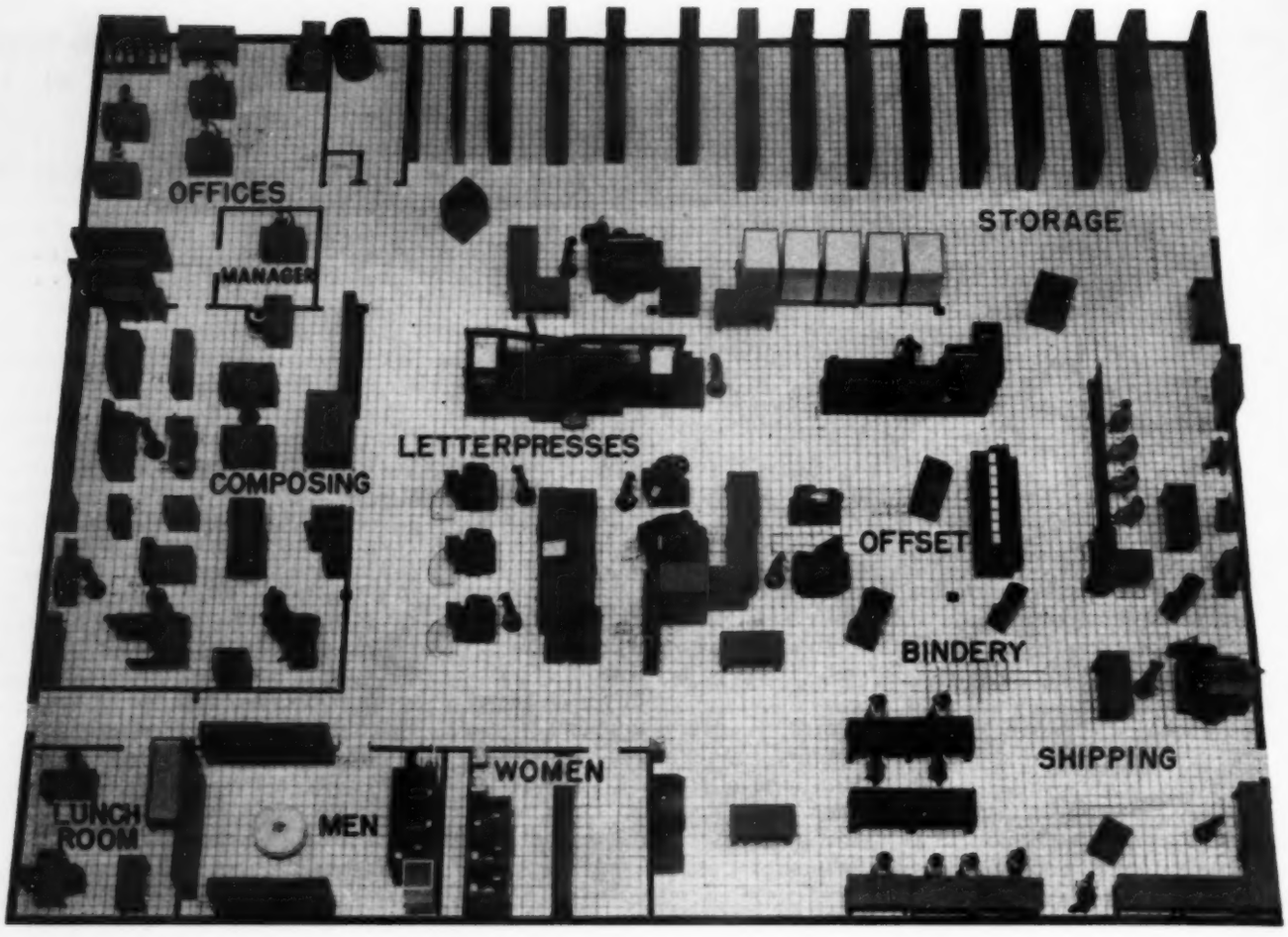
The N. S. Yaffe Printing Co., Omaha, Neb., has doubled the size of its plant in a move last year into a newly-constructed building. The company is now in full operation in a building (shown here) which affords more than 5000 sq. ft.—3040 sq. ft. in the plant area, 1160 sq. ft. for offices, and 836 sq. ft. for a basement warehouse.



The Yaffe firm, which was founded in 1906, performs regular commercial job printing while specializing in the production of color labels and menus. It is managed by a father-sons team consisting of N. S. Yaffe, president, together with his sons, Sol and Irvin, sales manager and production manager, respectively.

The company has approx. 10 employees and is equipped primarily for letterpress printing. A 22 in. by 28 in. Heidelberg cylinder press is the plant's newest piece of equipment. A 10 in. by 14 in. Davidson offset press is the extent of Yaffe's offset operations.

The 70 ft. by 60 ft. one story building with partial basement is constructed of concrete block and brick. It is air conditioned throughout. There are concrete floors in the plant area; asphalt tile floors in the offices. The roof of the structure is designed with a decking for noise reduction in the production areas. Fluorescent lighting, customer parking in the front and employee parking in the rear are other features.



Three-dimensional Layout of Proposed Plant

The floor plan layout pictured above, which utilizes three-dimensional equipment models for conveying the arrangement of the plant, is for a proposed new building to handle the commercial printing business of Eau Claire Book & Stationery Co., Eau Claire, Wis. The layout, which was prepared by Paul J. Ocken, general manager, Graphic Arts Industry, Inc., Minneapolis, Minn., shows a combination letterpress-offset plant comprising 12,000 sq. ft. of floor area. Workflow will follow a generally straight line from the plant manager's office at the front of the building to the shipping department at the rear. It is anticipated that the building will be of fireproof construction, have concrete floors, fluorescent lighting, and will cost approx. $125,000. David R. Steven is president and general manager of the company, which claims to be the largest school supply firm in Wisconsin, and Tom Bartingale, jr., is manager of the commercial printing department.

Michigan Newspaper Renovates Building

The Sault Ste. Marie (Mich.) *Evening News* has renovated its present building in order to provide more floor area for its newspaper operations. Location and building sizes remain the same, but departments have been enlarged and relocated. The additional space was acquired by moving the job printing department into another building at a different location within the city.

One of the major changes took place in the composing room where equipment was relocated to meet the workflow demand from a different location. It is expected the change will provide a more efficient operation, stated Wheeler W. Batdorff, composing room superintendent.

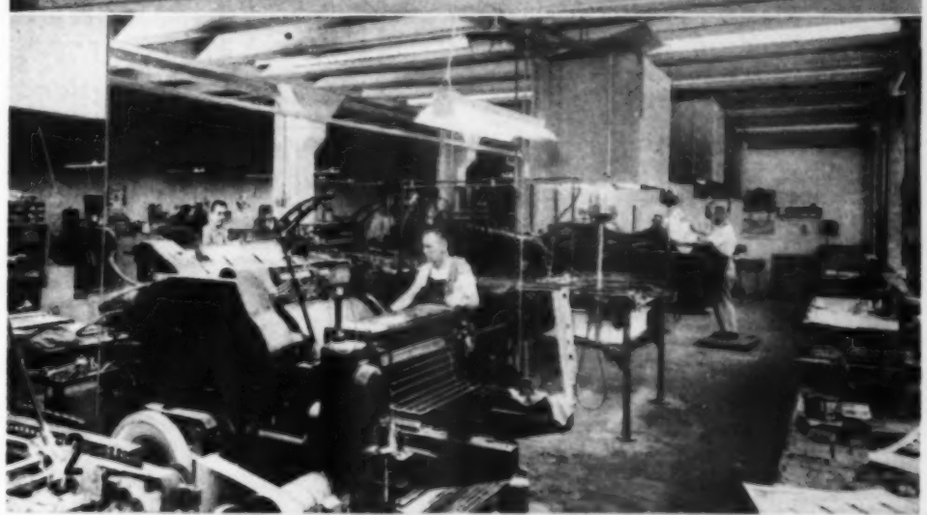
Direct access to the stereotype department from the composing room is now possible by means of a stairway built in the center of the building. A dumbwaiter has been installed for sending made up pages to stereotype. New lighting and in-plant communications systems are other new features. Equipment in both stereotype and press rooms have been improved.

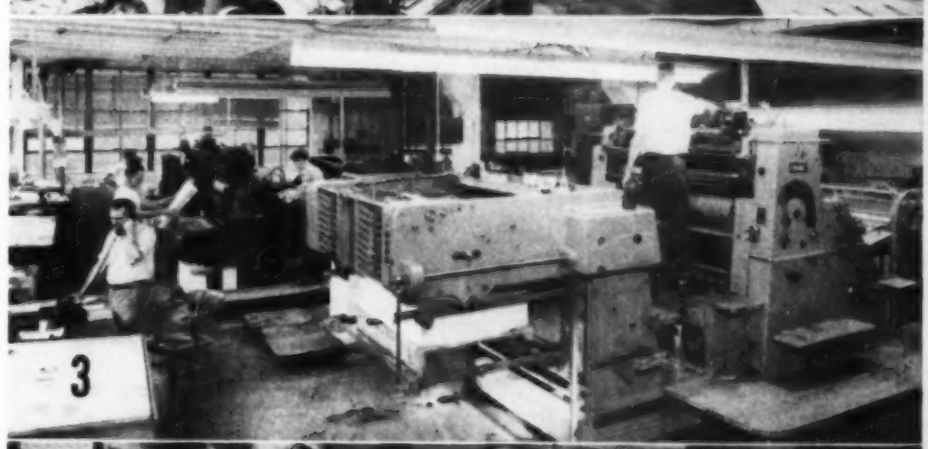
Combination Firm Enlarges Plant— Makes Revisions

The McWhirter Company, combination letterpress-offset printers of Kansas City, Mo., has gained 6000 sq. ft. of floor area in its plant under an enlargement project costing $150 thousand. The expansion was made possible through construction of a two-story and basement building which was erected on a site adjoining the company's original plant.

The new building and the original structure together provide a modern 50 ft. brick facade, with 2400 sq. ft. of office area, a new entrance and enlarged production space. In all, the company has 21,000 sq. ft., including basement area for the storage of paper.

According to Alfred C. McWhirter, president of the firm, the overall cost of the building addition was approx. $80 thousand. He also reported that the company last year added approx. $65 thousand worth of new equipment. He said his company's business volume has increased 136% in the last four years, emphasizing the decision to enlarge. The McWhirter Company produces all types of commercial printing with special emphasis on advertising material and industrial publications. Orville Lawson is production manager of the firm.





Views of McWhirter's Expanded Plant

1—A modern 50 ft. brick facade provides the company a new look in its enlarged Kansas City plant.

2—A section of the letterpress department showing some of the firm's cylinder presses which include Heidelberg and Miller models. A provision for concentrating light over the delivery end of some presses—aiding color match—can be seen in the box-like devices suspended from the ceiling in the upper right background.

3—A new Miehle offset press (foreground) has been added to the offset department's equipment. In the far left background are the company's Harris offset presses.

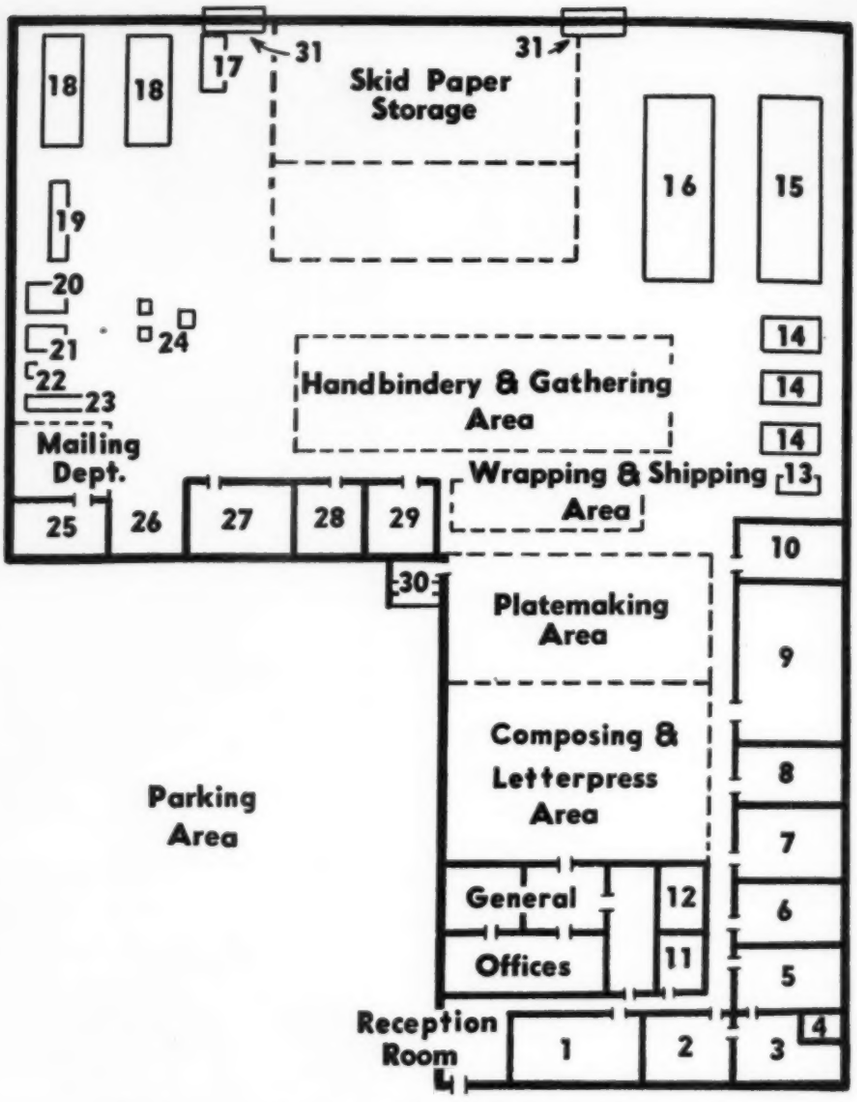
4—The well-equipped McWhirter bindery. Although we are without substantiating information, the disks suspended from the ceiling in this department are apparently intended for reducing noise from the folders and other machinery. Similar devices have been effectively used by other plants which have been confronted with acoustical problems.

Insulated Roof Advantageous for California Plant

The Kerr Printers, Inc., building, located in Culver City, Calif., contains a total of 15,000 sq. ft. The entire building is dock height (note both truck and rail shipping accommodations). The 5 in. concrete floor was poured on a wire matting over a foundation of compacted adobe. The walls of the plant are brick. The trussed roof is supported by a 90 ft. truss span. Thus, there are no posts in the entire plant. The whole ceiling area has been insulated with double thick fiber glass and aluminum foil for temperature control and sound absorption. There are eight, thermostatically controlled forced air blowers for heating in winter and cooling in summer. The plant is illuminated entirely by fluorescent lighting, mostly Slimline 96 in., four-light fixtures.

Profile of Kerr Printers

Louis M. Gandelman, Kerr Printers president graduated from Carnegie Institute of Technology in 1937 with a Bachelor of Science degree in Printing Plant Management. After working for 11 years in the East, he bought Kerr Printers in 1947. It was then a small job shop. Presently the firm employs 50 people, including one salesman. The firm produces general commercial, process color and advertising material. The company also produces a large volume of U. S. Air Force flight manuals, parts catalogs and maintenance books.



Equipment Key and Floor Plan Identifications

1. Salesman's Office
2. Production Office
3. Customer Conference Room
4. Men's Wash Room
5. Gandelman Executive Office
6. Gandelman Work Office
7. Camera Room
8. Double Dark Room
9. Enclosed Stripping Area
10. Press Foreman's Office
11. Office Wash Room Women
12. Office Wash Room Men
13. 17½ in. by 22½ in. Offset Press
14. 23 in. by 36 in. One-color Offset Press
15. 36 in. by 48 in. Two-color Offset Press
16. 38 in. by 53 in. Sheet Fed Perfector Press
17. 14 in. by 20 in. Folder
18. 25 in. by 38 in. Folder
19. Rapid Three Knife Trimmer
20. 50 in. Cutter
21. 40 in. Cutter
22. Stitcher
23. Gang Stitcher
24. Three Multiple Spindle Drills
25. Security Vault
26. Shipping Dock
27. Employee Dressing Area
28. Men's Room
29. Women's Room
30. Employee's Entrance
31. Railroad Siding Loading Doors

Texas Firm's New 106,000 sq. ft. Plant

One of the major additions to the 1957 Graphic Arts building and equipment modernization program is that of the Steck Company, Austin, Tex. Floor area of the new plant (shown above) is approx. 106,000 sq. ft. Building and equipment cost, including moving, was approx. $1.5 million. Approx. 80% of the building will be air conditioned with control of both humidity and temperature.

Will Move This Spring

President E. W. Jackson stated that more than likely the new plant will be ready for occupancy about the middle or latter part of April. The production equipment, with the exception of the Lithographic Div., will be moved from the present downtown Austin quarters.

Some of the engineering services for the new building were provided by Olin E. Freedman, Chicago printing plant engineer.

The Steck Company sells and produces printed products in the following areas: Municipal, bank, county, commercial printing and forms work in all of Texas; school book printing and publishing throughout the South and Middlewest; long-run promotional color and contract printing in the Southwest, and insurance printing in the South and Middlewest.

In addition to the present equipment, two large presses will be installed in the new plant.

One of the new pieces of equipment will be a 50 in. two unit perfecting Hantscho offset press equipped with Cline automatic reels, tensions and pasters, with gas driers and folder.

The other large piece of equipment is a Hamilton five unit printing collator with up to 24½ in. web capacity. On this machine can be produced either zigzag fold continuous form or glued snapout forms up to quintuplicates, with as many as three copies printed both sides. The dry offset process will be used. Provision is also made for conventional numbering, punching and perforating.

In addition to the above new equipment, a Cline automatic reel, tensions and paster will be attached to the four unit perfecting web offset press now in use.

Production executives of The Steck Company are: R. E. Eggeling, general superintendent; G. N. Martin, assistant general superintendent; Ralph Vogel, night superintendent; W. B. Anderson, production control and planning; Robert S. Jones, offset foreman; Everett Newcomer, foreman of the offset press department; Fred G. Oglebay, foreman of letterpress department; Carl G. Beard, composing room foreman; Felix Calhoun, assistant composing room foreman; John Paschall, bindery foreman.

A Newspaper Plant on Two Levels

The newly-constructed newspaper plant of the Newburgh-Beacon (N.Y.) *News* has been built on sloping terrain which provides the advantages of a two-level building. The structure appears as a single story building from the front but consists of two stories on the sides and rear. This design provides ground level access to offices and editorial and composing rooms from the building's front, while other mechanical departments may be reached from ground level at the building's rear.

The new plant, which cost approx. $500 thousand, provides 25,000 sq. ft. of floor area. Features of the 44 ft. by 73 ft. composing room include steel-bound maple flooring, fluorescent lighting fixtures on 7½ ft. centers, and tinted glass in upper window panes.

Double doors have been installed at the building's rear for moving equipment in or out of the building. Three overhead doors on one lower level side open directly from the mailroom onto loading docks. A railroad spur has been built for newsprint delivery. Storage areas in the building will accommodate a four month paper supply. There is also provision for up to 125 automobiles in a blacktopped parking lot.

All-Letterpress Plant Features A Straight Workflow

A newly-erected $125 thousand building is slated for accupancy late this spring by Christian Printing Co., Durham, N. C. The structure (shown here) will provide the company with space for its offices and production departments measuring 60 ft. wide by 240 ft. deep—all on one floor. The design of the plant permits straight line workflow. Offices are to be located at the front of the building and the shipping department at the very rear.

Floors in the plant area are to be of concrete with vinyl tile over concrete in the offices. The new quarters will also feature fluorescent lighting throughout, air conditioned offices and insulated roof. There will be provisions at the front of the building for customer parking and at the rear for employee parking.

According to J. Fred Christian, president of the firm, help in planning the equipment layout of the plant was provided by Miehle Printing Press & Mfg. Co. The all-letterpress company produces college publications and catalogs, advertising material, office forms, college and high school newspapers, booklets, etc. A. G. Sugg is general superintendent.

Air Conditioned Photoengraving and Gravure Plant

One of the interesting recent plant improvement programs which has been completed is that of two firms in Detroit. Cadillac Color Plate Co. and its affiliate, Intaglio-Cadillac, Inc., are now housed in a two story remodeled existing building purchased for the purpose. (See picture below.) In this 36,000 sq. ft. floor space plant, both firms employ a working force of 90 people. Walls were redecorated and improved lighting fixtures provided.

President Harold M. Towne, Cadillac Color Plate, relates that the decision to install air conditioning was made "because it gives us the kind of temperature and humidity control that spells quality in our business."

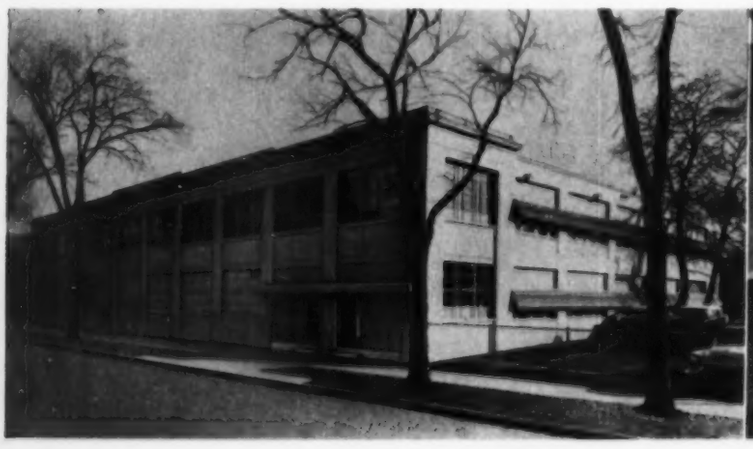
The air conditioning system consists of nine American Blower packaged units with exhaust fans, humidifiers and pre-heat coils. Towne also stated that human productive efficiency is improved. He added: "An air conditioned plant is not just for the pleasure of the men—it's for dollars, too."

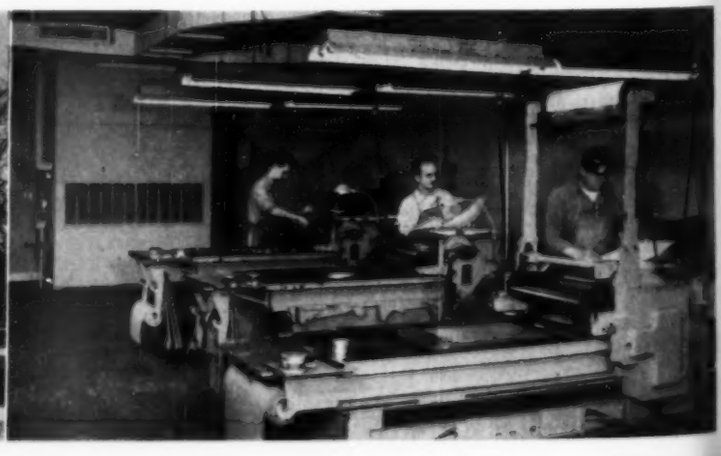
Intaglio-Cadillac, Inc., is located on the first floor; Cadillac Color Plate is on the second floor.

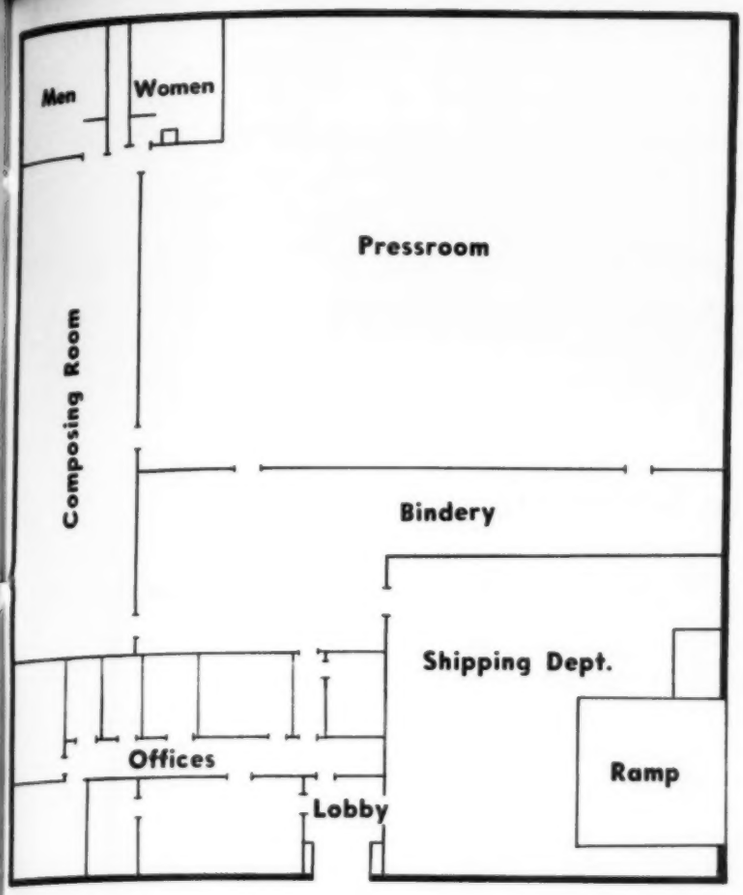
Cadillac Color Plate uses six darkroom cameras with carbon arc lamps. Smoke is carried away by normal air circulation. Increased accuracy is promised through better control in dry plates, strip film and emulsion. "In our stripping and printing departments," said Towne, "we use whirlers equipped with infra-red lamps which are heated only during the actual sensitizing operation."

In the picture below is shown part of the engraving proof press department. Towne is pleased with the improved quality, especially color work.

James M. Dunn, vice president, Intaglio-Cadillac, said: "Gravure work is much more sensitive to temperature and humidity levels. Carbon tissue and film are sensitive to moisture changes. The gravure etching department is the most critical with regard to need for controlled temperature and humidity."



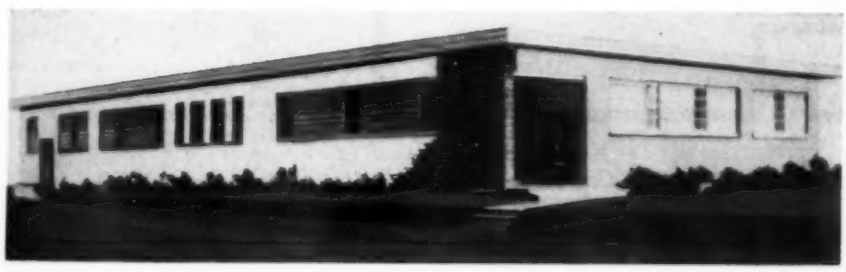




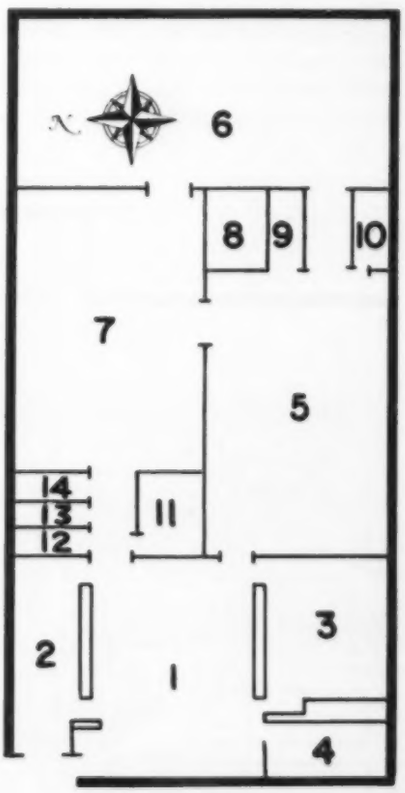
Richmond Color Printing Firm Has New Plant

More than 25,000 sq. ft. of manufacturing and storage space are contained in the new plant of W. M. Brown & Son, Inc., Richmond, Va., printing firm specializing in color work. This is a two floor plant. The lower level of the structure will accommodate 20 railroad car loads of paper, being devoted almost exclusively to paper storage. The upper level, shown in the floor plan above, is joined with the company's original pressroom and contains production equipment and new offices. Architects for the new building were Slaughter, Savolle and Blackburn, Richmond, Va. General contractors were Thorington Construction Co.

Triples Own Floor Area by Building



The new plant of the *Poultryman*, national newspaper of the poultry industry, is 64 ft. by 119 ft. This 7600 sq. ft. building, which houses a 64-tabloid page Goss rotary press among other equipment, is nearly three times as large as the old home of the newspaper. The completely air conditioned building is of cement block construction with glass blocks forming a good portion of the outside walls. The glass block sections, with adjoining windows at the outside areas, start approx. 6 ft. from the floor level and are 3 ft. high. Lighting is recessed fluorescent type, with the ceiling of marbled insulating board supplied by the Johns-Manville Co. The building is located on Delsea Drive, a principal north-south highway in South Jersey, in the city of Vineland. It is set back approx. 40 ft. from the road. In the rear are parking facilities for employees' and visitors' cars. Two large, double doors provide access to the pressroom for delivery of newsprint by truck. The architect was Edward Scheldt and the contractor was Andrew Perino; both are of Vineland, N. J.



Floor Plan Layout of The *Poultryman*

1—Business Office
2—Advertising Dept.
3—News Room
4—Publisher's Office
5—Composing Room
6—Pressroom
7—Subscription and Mailing Depts.
8—Heater Room
9—Darkroom
10—Casting Room
11—Conference Room
12—Men's Toilet
13—Ladies' Toilet
14—Lunch Room

Equips New Plant for Self-Maintenance

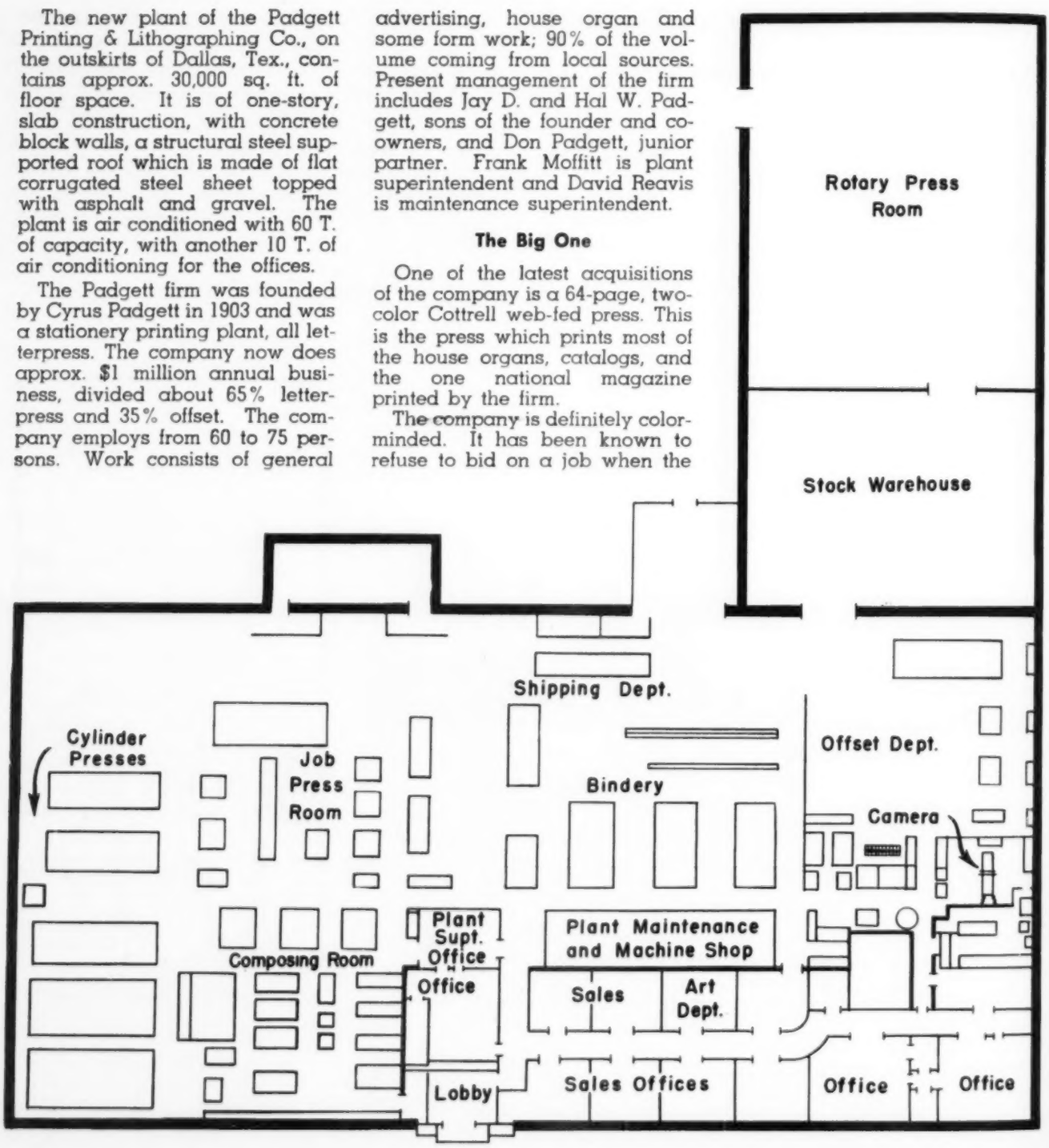
The new plant of the Padgett Printing & Lithographing Co., on the outskirts of Dallas, Tex., contains approx. 30,000 sq. ft. of floor space. It is of one-story, slab construction, with concrete block walls, a structural steel supported roof which is made of flat corrugated steel sheet topped with asphalt and gravel. The plant is air conditioned with 60 T. of capacity, with another 10 T. of air conditioning for the offices.

The Padgett firm was founded by Cyrus Padgett in 1903 and was a stationery printing plant, all letterpress. The company now does approx. $1 million annual business, divided about 65% letterpress and 35% offset. The company employs from 60 to 75 persons. Work consists of general advertising, house organ and some form work; 90% of the volume coming from local sources. Present management of the firm includes Jay D. and Hal W. Padgett, sons of the founder and co-owners, and Don Padgett, junior partner. Frank Moffitt is plant superintendent and David Reavis is maintenance superintendent.

The Big One

One of the latest acquisitions of the company is a 64-page, two-color Cottrell web-fed press. This is the press which prints most of the house organs, catalogs, and the one national magazine printed by the firm.

The company is definitely color-minded. It has been known to refuse to bid on a job when the



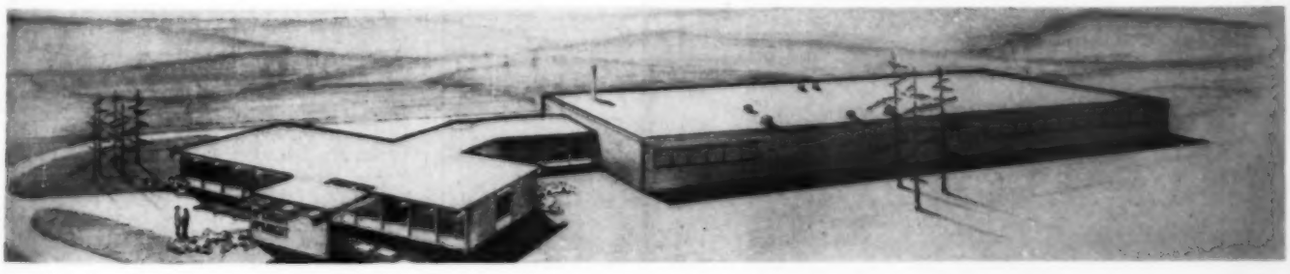
management felt it would have to be done on a sub-standard basis. Another bit of philosophy of the firm involves doing as much of the maintenance on all equipment as possible within the plant. The maintenance department is equipped with a small miller, a shaper, a grinder, two lathes, and a drill press. Parts are replaced as soon as they begin to show signs of wear rather than waiting until such parts definitely interfere with production.

In the letterpress department, the firm has two single-color Miehles; two two-color Miehles; one No. 3 Open Miehle; one Chandler & Price; two Heidelbergs; three Miehle Verticals; and one No. 3 Kelly press. In the lithographic department, the firm has one 24 in. ATF camera; one Magnastep Step & Repeat Machine; two plate whirlers; two 17 in. by 22 in. Harris presses; one 22 in. by 34 in. two-color Harris presses and one Multi-Lith. In the bindery, the firm has two 25 in. by 38 in. Baum folders; one Model E Cleveland folder; two Seybold cutters, one 36 in. and one 44 in.; one Pitney-Bowes folder; and one 6-pocket Sheridan interleaving machine, with saddle stitcher and 3-side trimmer.

Materials for N. J. Newspaper Plant Described

(For the floor plan of the Courier-Post, see Printing Equipment Engineer, March, 1955, page 56.)

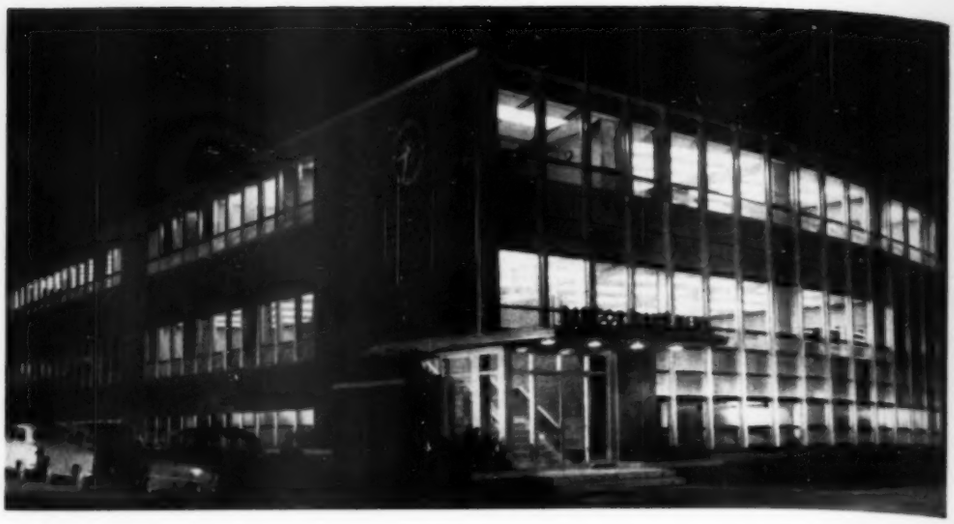
The Camden (N.J.) *Courier-Post's* new plant contains 66,000 sq. ft. of floor space—all on one floor. It is basically a block structure with long span steel roof joists supporting a metal deck and featherweight concrete slab roof, says Neal E. Dyer, business manager and mechanical superintendent. The front elevation is buff brick and blue ceramic tile. The entire front is non-glare Solex glass and there is a continuous row of aluminum sash with glare and heat-reducing glass. Year-round air conditioning is a feature of the new building. Two Carrier reciprocating refrigerating machines provide a total of 150 T. of cooling air. In the pressroom, stereotype department, mailroom and paper storage room, air conditioning is not provided but Carrier units (heaters and ventilators) do provide for comfortable temperatures. Ceilings in all areas except the composing room are made of Fibre Glass. The composing room ceiling is made of Transite Panels, a cement asbestos material. The building is divided into three fire zones and Acacia automatic sprinklers have been installed throughout. A special feature of the *Courier-Post* plant is the sound proof, glass enclosed, air conditioned proofroom in the center of the composing room. All electrical and telephone wiring in the composing room is run in under-floor ducts. Except for the machine area, blanket lighting is used. The floor is covered with deep red Tuff-Tex and the walls are a non-glare light reflecting light gray. Since the composing room is completely air conditioned and the adjoining stereotype department is air cooled, there are automatic doors permitting passage of pages on trucks without loss of air conditioning. The truck dock, which is just outside the mailroom, accommodates eight trucks at one time and is completely enclosed for fast all weather loading.



Plans for Future Incorporated in Plant Layout

Planned type and volume of production for the next 10 year period were considered in the layout of the new McKnight & McKnight Publishing Co. plant, Bloomington, Ill. Olin Freedman Assoc. counseled the firm's top management which includes the founder and president, W. W. McKnight, sr.; William McKnight, jr., secretary-treasurer and Wesley D. Stephens, general manager. The plant layout plans were then submitted to the architects, Schaeffer and Wilson, Bloomington, Ill., with instructions to build a suitable floor, wall and roof around these plans. The 13½ A. plant site is located on the outskirts of Bloomington. The plant is a one-story, 8 in. concrete block with brick veneer facing building. Concrete floors are 8 in. thick throughout the building. Fluorescent lighting up to 50 ft. candles in all areas except the incandescent lights used in the stock storage areas. The duct work is provided for air conditioning but for the present humidity control is limited to the camera, stripping, and platemaking areas with the use of the Kalhovar unit. Plumbing, heating and ventilating engineering was done by S. Allen Baird, Peoria, Ill. Overall dimensions of the new plant are 70 ft. by 180 ft. the office area provides an additional 5000 sq. ft. of space. McKnight & McKnight produces textbook publications, instructional manuals, letterheads, brochures, catalogs, etc.

Maine Newspaper Has New Building



One of the most striking features of ıe new building of the Bangor (Me.) *aily News* is the number of aluminum indows that not only attract attention ut help illuminate and ventilate the lant. All of the window fromes are luminum. Another distinctive feature of ıe building is the flush mounted light- ıg in the business office, advertising and ditorial departments, and private offices. hese light fixtures cover more than 50% the ceiling area and are constructed ith sufficient luminous area to provide better distribution of light with less rightness. Lighting in the composing ›om and stereotype area is fluorescent. LM fixtures are used in the basement aper storage area and the auditorium. he building is of steel frame and brick onstruction. For even greater fire pro- ction, the entire building is equipped ith a sprinkler system. Architects were rowell, Lancaster & Higgins of Bangor, Me. Contractor was Consolidated Constructor, Inc., of Portland, Me. The foundation of the building was let under a separate contract with Nicherson & O'Day of Bangor. The foundations are sunk into bed rock. There is forced air ventilation in the composing room, photoengraving and photographic departments as well as in all interior rooms. In April, 1951, the newspaper began operations in its new press wing of approx. 80 ft. by 80 ft. At that time, a new 4 unit Hoe Super-Speed Color Convertible press was put into operation. Spurring the expansion has been an unusual growth in circulation over the past 16 years from 23,857 to 70,891. Overall dimensions of the new building are 153 ft. by 82 ft.

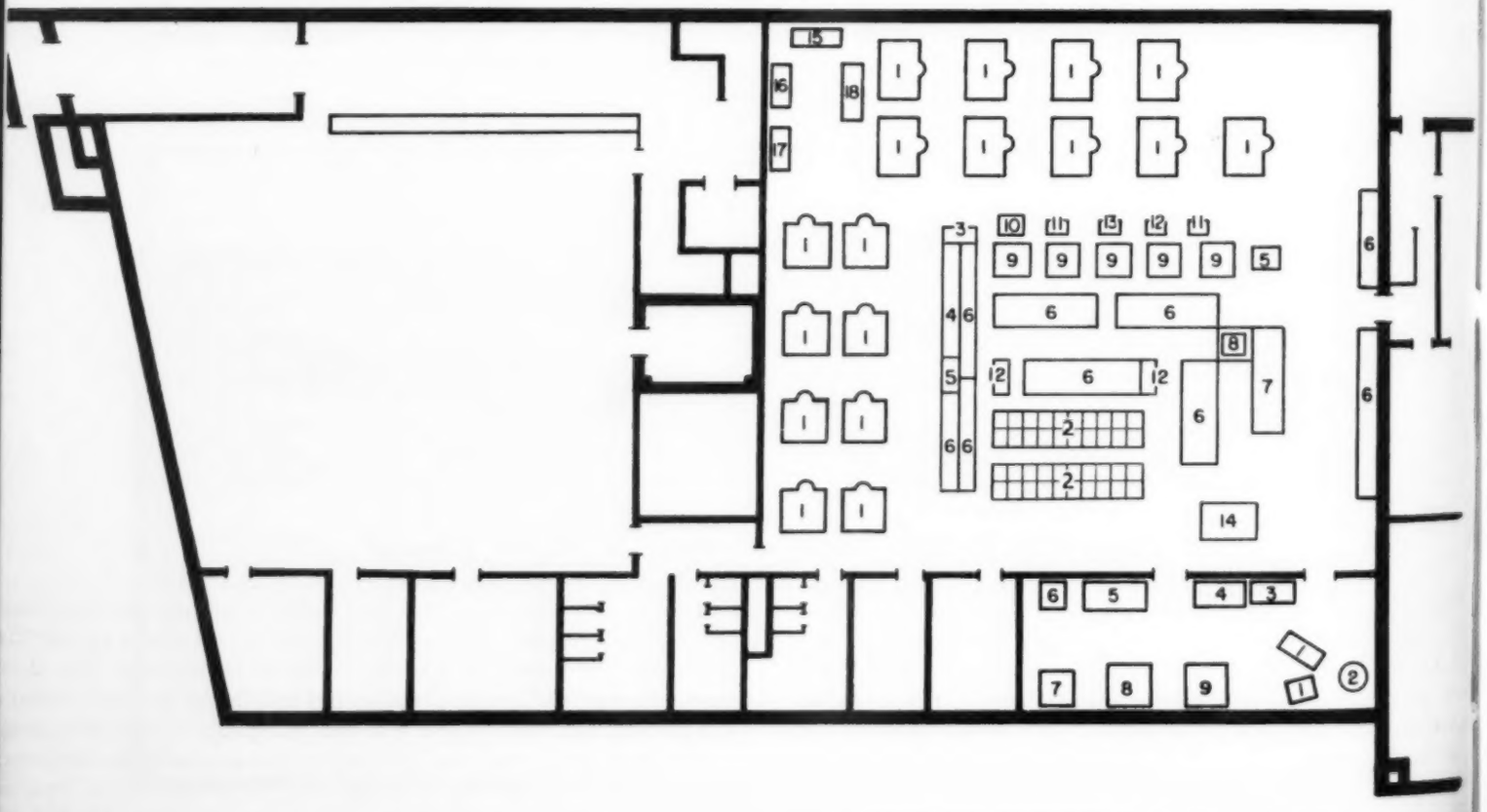
Bangor (Me.) *Daily News* Composing Room and Stereotype Flat Casting Room

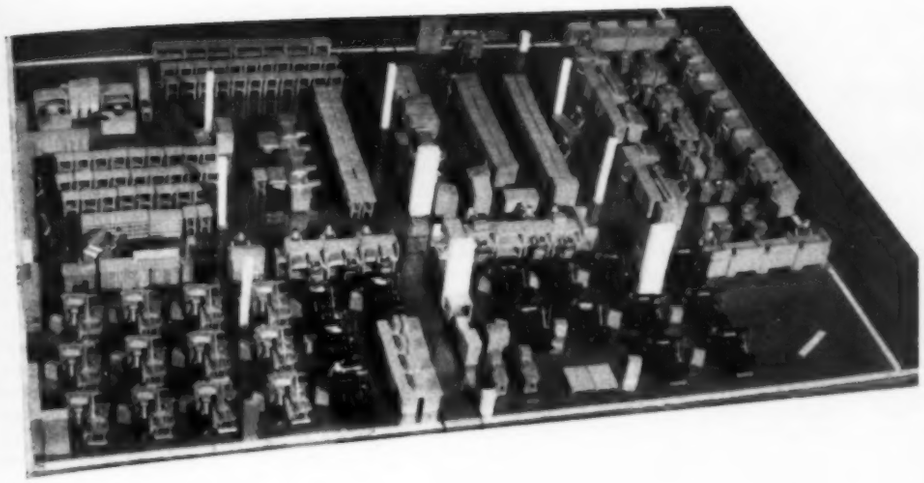
Composing Room

. Linotypes
. Page Trucks
. News Copy Board
. News Dump Bank
. Proof Press
6. Benches
7. Ad Bench
8. Dumbwaiter to Engraving and Advertising Departments
9. Ad Frames
10. Tube Carrier System to Editorial and Proofroom
11. Mitering Machine and Border Case
12. Saw
13. Morrison Slug Stripper
14. Mat Roller
15. Machinist's Lathe
16. Thompson Type Caster
17. Elrod Strip Caster
18. Machinist's Bench

Stereotype Area

1. Flat Casting Box
2. Metal Pot
3. Metal Cast Bench
4. Mat Backing Bench
5. Premier Rotary Shaver
6. Jig Saw
7. Router
8. Hoe Saw
9. Large Hoe Saw





This is a view of three dimensional scale model composing room equipment layout in plant of Long Island (N.Y.) *Newsday*. The machine models are mounted on a Plexiglas plate, the surface of which is scored with lines. Space between lines represents ¼ in. per ft. These models have become part of the management tools at *Newsday*.

Model-Planning a Composing Room

By ALLAN WOODS*

**Production Manager*, Newsday, *Long Island, N. Y.*

Early in 1954 it became obvious that *Newsday's* circulation and advertising volume would soon outgrow production capacity. The continued movement of population from New York, N.Y., and the thousands of new homes and stores being built were steadily demanding more papers and larger papers month by month.

Plans were made to increase press capacity from 128 page maximum to 144 pages as quickly as possible and then to add another complete press the following year.

Joseph Curley, *Newsday's* composing room foreman, quickly determined that the increase of 16 pages would result in a production load exceeding the safe limits of machine capacity of the composing room.

Early estimates indicated that a real problem was coming up—where to find the space for the additional equipment. Previous expansion had used up all vacant space and for a while it appeared that it would be necessary to enlarge the building. Attempts at layouts on paper failed to bring a satisfactory solution. To pick up the necessary space would require that machines be closed up and it was not possible to properly visualize how close they could be positioned.

A great deal of time was spent trying to plan a suitable layout on paper. It was frustrating and fruitless and resulted in confusion and disagreement.

Curley learned about a local company, The Model Planning Co., which was manufacturing machine models to order. This looked like a possible answer to his needs.

Fred Sitler, owner of the company, was called in and after measuring and photographing each different piece of equipment in the composing room, soon delivered amazingly accurate scale models.

Using a sheet of Plexiglas scored to form a grid with lines at ¼ in. intervals as a floor, Curley was able to try out a great many arrangements of equipment. Trial after trial was made until finally a completely satisfactory layout was achieved.

During this process of finding the best layout it was found that the scale models made possible such excellent visualization that mistakes or weaknesses of a particular arrangement of equipment were readily apparent. This had the effect of eliminating the arguments, indecision and self-doubt which are the usual obstacles to good planning.

These models have now become part of the standard management tools at *Newsday*. When an idea for improving a particular section of the composing room is conceived, or when it is necessary to fit in a new piece of equipment, the scale models are used with good results. There is little doubt that the models have actually stimulated forward thinking.

Plans are being made to display this complete scale model of the *Newsday* composing room in the reception lobby where it will be used as a starting point for guided tours of the plant.

Use of these scale models of composing room equipment has stimulated considerable interest throughout the industry and as a result it is expected that the complete *Newsday* composing room in model form will be on display at the ANPA Mechanical Conference, Chicago, in June.

The three dimensional machine models shown in this layout for the Long Island (N.Y.) *Newsday* were furnished by Fred Sitler, (left) The Model Planning Co. Allan Woods, *Newsday* production manager, is discussing proposed composing room layout with Sitler.

Automatic Conveyor System Speeds Stereo Plate Handling

Increased speed with automatic handling of stereotype plates between stereo department and pressroom has been achieved at New Brunswick (N.J.) *Home News* where plates are transferred from casting to press areas—a distance of 90 ft.—in less than 2 min. Responsible for this swift transfer is a newly-installed interfloor conveyor system which permits plates to be fed to the pressroom every 30 sec. following the first load.

The conveyor was specially designed to combine speed with safety, thus safeguarding the plates from accidents which might cause surface scratches. This safety is obtained by electrical interlocking of all conveyor elements, plus placement of all switches and guide features under the plates, opposite the printing surface. Other control and guide mechanisms are located beside the conveyor, at points where the plates can't be damaged.

The system is set up for automatic transfer in either direction, so that used plates can be returned from the presses for melting down. Reversal is controlled by push button.

The conveyor was designed by Gifford-Wood Co., manufacturers of interfloor conveying systems. The *Home News* system includes five separate power-driven conveyors, including the vertical drop from the second to first floors; a gravity roller section feeding plates into the automatic system; and numerous switches, control panels and safety features.

Requires 300 Plates A Week

The 77-year-old *Home News* publishes three editions a day, averaging a total of 36,243 copies, and puts out a combined Sunday edition of 31,151 copies. The various editions require about 300 stereotype plates a week, including makeovers.

The old system for transferring plates utilized two men, two hand trucks and a dumbwaiter. In the casting room a man would load 10 to 12 finished stereo plates on a hand truck. The truck was pushed into another room, about 20 ft. away, to a dumbwaiter. After making sure that someone was on the floor below to receive the plates, he would load them into the dumbwaiter. On the receiving floor another man would unload them onto another hand truck and transfer them to the printing area, about 75 ft. away. The reverse of this procedure was followed for returning used plates to the casting room.

The automatic two-way G-W system makes the same trip in one min. and 40 sec. At top capacity, it automatically transfers 20 plates in 10 min., either from casting to pressroom, or in the reverse direction. Manual loading, unloading and carting plates back and forth has been eliminated, and with it, the danger of damage from manual handling.

Safety Features in System

Safety switches and controls in the automatic system are installed at every transfer point where an accident might occur. At both entrances to the shaft a micro switch is set to prevent loading more than one plate at a time in the vertical conveyor. Switches spotted along the long horizontal conveyor on the first floor will stop the entire system if any danger of plate pile-up should occur. Control panels at either end of the system keep operators fully informed on the progress of plates through the system. In addition, all conveyors have guide plates or guide rails in the center of the conveyor, and a 3 in. steel channel running along either side of the conveyor.

First conveyor in the *Home News* system is a 10 ft. gravity roller section. At the same time a plate is pushed onto this section, the operator pushes the "Start" button on the control panel. This starts the forward movement of the 2 ft. powered feed conveyor just past the gravity section.

A roller conveyor on the floor of the vertical conveyor is interlocked by gears with this feed conveyor and starts moving in the same direction and at the same speed. The plate moves down the gravity conveyor onto the driven section and into the vertical conveyor, or gig, at a speed of 50 f.p.m.

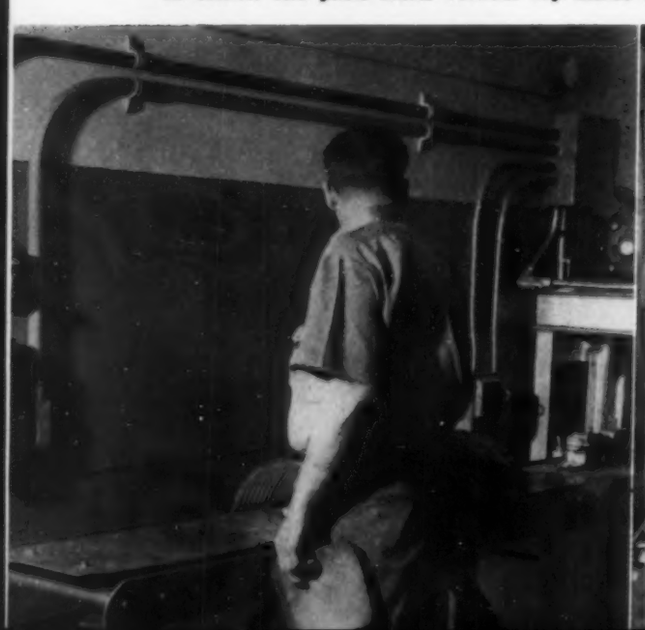
At the rear of the gig shaft, the plate strikes a micro switch which starts the downward motion of the vertical element at 60 f.p.m. As the gig descends it strikes another switch in the shaft, which stops the motion of the feed conveyor. Rollers on the floor of the gig are stopped when the downward motion disengages the gears from the feed conveyor.

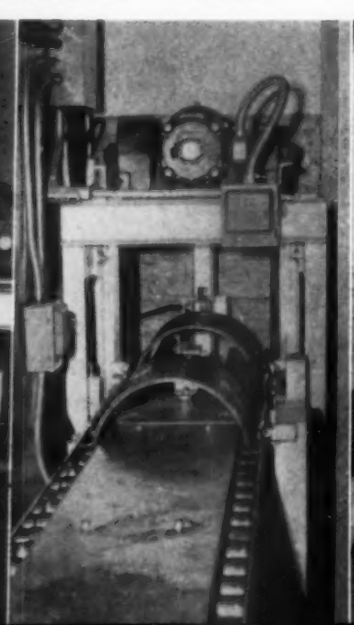
The gig travels a distance of 7

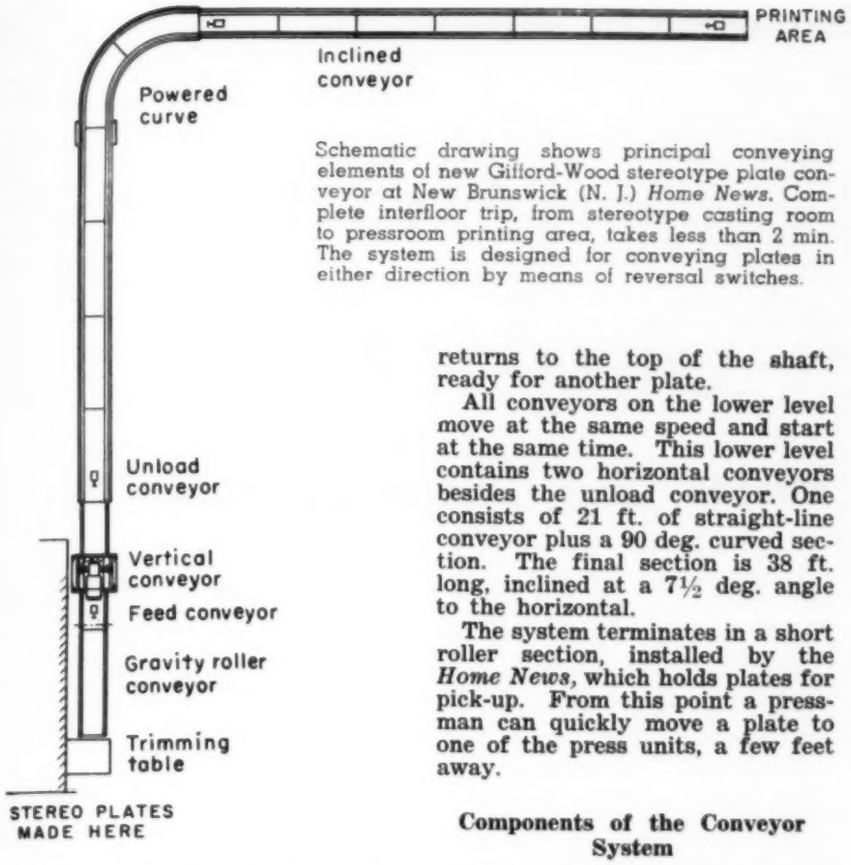
In photo below at left, stereotype department operator starts curved stereotype plate on its way to pressroom on gravity roller section of automatic Gifford-Wood interfloor conveyor system at New Brunswick (N. J.) *Home News*. Push buttons at left are used for starting motor-driven conveyors located past gravity section.

In center, one plate starts vertical trip inside gig as second waits for empty gig to return. Switch system prevents overloading of gig. All switch controls are positioned in center of conveyor, rather than at side, to prevent switch contacting, and damaging, printing side of plate.

At right, plate moves onto horizontal conveyor on lower level. Main control panel for entire system appears in background.







Schematic drawing shows principal conveying elements of new Gifford-Wood stereotype plate conveyor at New Brunswick (N. J.) *Home News*. Complete interfloor trip, from stereotype casting room to pressroom printing area, takes less than 2 min. The system is designed for conveying plates in either direction by means of reversal switches.

ft. to the bottom of the shaft. There it strikes another switch, which stops the downward motion, at the same time starting the forward motion of the unload conveyor. Again, the roller conveyor inside the gig is interlocked by gears with this unload conveyor. This moves the plate out onto the unload section and starts it down the final conveyor line, again at 50 f.p.m.

After a three sec. time lapse, controlled by a micro switch on the conveyor outside the gig, the gig returns to the top of the shaft, ready for another plate.

All conveyors on the lower level move at the same speed and start at the same time. This lower level contains two horizontal conveyors besides the unload conveyor. One consists of 21 ft. of straight-line conveyor plus a 90 deg. curved section. The final section is 38 ft. long, inclined at a 7½ deg. angle to the horizontal.

The system terminates in a short roller section, installed by the *Home News*, which holds plates for pick-up. From this point a pressman can quickly move a plate to one of the press units, a few feet away.

Components of the Conveyor System

The overall structure housing the vertical conveyor is 17 ft., 9 in. high. Its base is set on a concrete roof. It was leveled and tested at time of installation, then grouted into the base. The conveyor base is also bolted to a 12 in. beam to insure maximum stability.

The gravity roller conveyor at the head of the system is 10 ft. long and has center plate guides to insure accurate feeding of the plate onto the first live conveyor.

The powered feed conveyor is a 1½ in. double chain with guide plate on either side. It is driven by a ½ h.p. gear motor at 55 r.p.m. output speed.

The vertical motion of the gig is provided by a ½ h.p. master right angle combination gear motor at 20.5 r.p.m. Rollers inside the floor conveyor are the same as on the feed conveyor, except that inside guide rails are used instead of guide plate.

The unload, or receiving conveyor, past the vertical element, has the same type motor and chains as the feed conveyor.

The 21 ft. horizontal conveyor and curved section on the lower level are powered by a 1½ h.p. motor at 30 r.p.m. Power is transmitted through chains to 4 in. diameter power rollers. These rollers have differing diameters at either end, to compensate for the curve.

The final inclined section of the system is a chain-type conveyor powered by a 1-h.p. gear motor.

The main control panel for the entire system is located midway between the loading and unloading ends of the conveyor, for wiring convenience. It contains controls for the five conveyor motors, for the reversing switch, for the 3 sec. timer at either end of the conveyor shaft, and seven switch controls.

Plastic wiring is used throughout the system. For wiring emergencies, spare wires are installed in the control box for each switch, controller and motor.

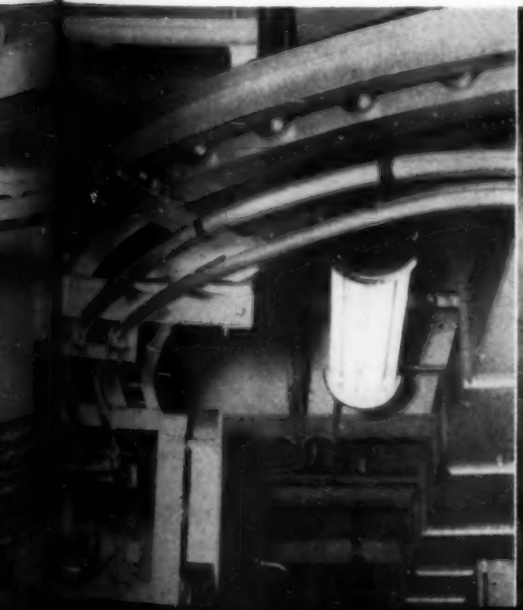
The control panel in the stereo department contains push buttons for "up," "down," and "safe-run." It also contains the reverse switch and a signal bell for alerting the operator at the other end of the system. At the delivery end another control panel and has a "safe-run" push button and a signal bell. Each motor in the system has a disconnect switch, within arm's

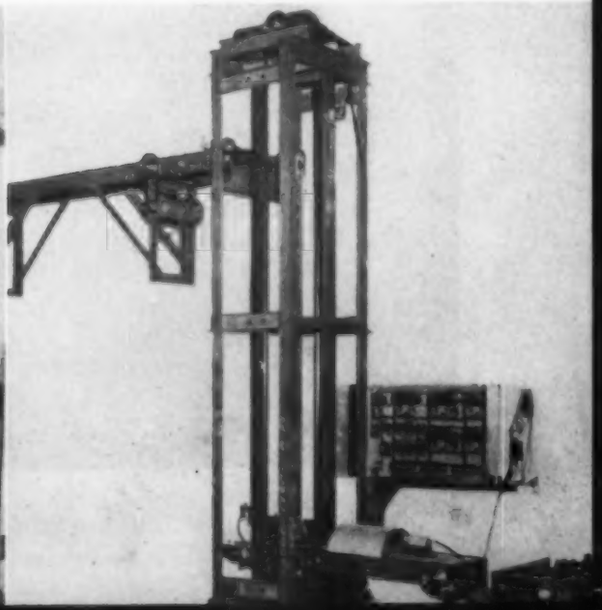
(*Continued on Page* 108)

At left, below, is the curved section of lower horizontal conveyor. Powered by a separate 1½ h.p. gear motor, the conveyor has special power rollers, tapered to compensate for curve. Motor past curved section powers final inclined conveyor.

Center, delivery end of conveyor system. This final section (after curved section) is 38 ft. long, inclined 7½ deg. angle to the horizontal.

At right, important components of G-W stereo plate conveyor system, photographed prior to installation. Horizontal and vertical sections, and controls are shown.





$1.5 Million Plant Expansion by Wood

A $1.5 million building, containing 60,400 sq. ft. floor space, to be used as its assembly plant, launches an expansion program for the Wood Newspaper Machinery Corp., Plainfield, N. J., as the company rounds out its first century. Announcement was made by John J. Shea, Wood's president.

Construction is under way on 5 A. of a 46 A. plot recently purchased by the company in Middlesex, N. J., 5 mi. West of Plainfield. When completed in April, the new building will increase by 35% Wood's 170,000 sq. ft. present plant, Shea said. Several hundred men will be employed in the new plant. Personnel in the Plainfield shop totals 500.

The firm manufactures all types of newspaper presses, reels, tensions and Autopasters, and stereotype plate casting equipment.

Sub-assembly and final assembly work on the company's two largest models of presses will be concentrated in the new building. These are the multi-ton Metropolitan on which can be printed up to 60,000 papers per hour, and the slightly smaller Cosmopolitan. Wood four-color press unit for ROP printing also will be assembled in this plant.

A multi-million dollar order from the Buffalo (N.Y.) *Evening News* for presses and equipment, one of the largest orders of its kind placed in the United States in recent years, dictated the project at this time, Shea said, although it had been under discussion as a result of steadily increasing business.

The building will be constructed of red brick and glass, 240 ft. wide and 338 ft. long, built in the form of three long, high bays, each 80 ft. wide.

Length of the plant will parallel adjacent tracks of the Lehigh Valley and Jersey Central railroads to the North, from which 114 ft. of a siding, with a capacity of two freight cars, will be inside the building to permit loading and unloading by overhead crane.

Other features of the plant will be 440 v., 3 ph. electric current provided by the local utility, power ventilators in the roof which can change the air in the building six times per hour, a sprinkler system, mercury vapor illumination in the shop, fluorescent lighting in the offices, a depressed trailer truck dock and three doors through which trucks can be driven at floor level, and a truck scale that can weigh up to 35 T.

There also will be a 48,000 sq. ft. blacktop parking lot for 125 autos and exterior flood lights to facilitate watchman patrol at night.

Special departments to be constructed in the plant will be maintenance, paint and box shops and a large stock room.

Overhead cranes of varying capacities will be installed in each bay, Shea reported. They will have a clearance of 26 ft. under the crane hook, since the largest presses are 25 ft. high.

In the largest bay will be a 25 T. cab-operated Euclid, a 15 T. cab-operated Shepherd-Niles and a 5 T. overhead Shaw-Box with pendant control that can be swung up into a dummy cab for operation.

There will be a 15 T. overhead Shepherd-Niles and a 5 T. Shaw-Box in the middle bay.

In the third bay will be a 5 T. Shaw-Box. In addition to these, there will be a 10,000 lb. capacity mobile crane for use both indoors and out.

Miehle, Goss, Dexter Combined

An engineering and manufacturing organization which brings to the printing and publishing industries a broad line of products and services came into being Jan. 31. At that time, the merger of Miehle Printing Press and Mfg. Co. and The Goss Printing Press Co. became effective. The resulting company will be known as Miehle-Goss-Dexter, Inc.

The company will function through four autonomously managed operating divisions: Goss Printing Press, Miehle Printing Press and Mfg., Dexter Folder, and Star-Kimble Motor. Dexter Folder and Star-Kimble were divisions of the Miehle Company, Dexter having been merged into Miehle in Sept., 1956.

The new company has 3000 shareowners, 4000 employees, plants in six U.S. and several foreign cities and sales and service facilities throughout the world. Quarters of the company are in Chicago.

M-G-D makes a wide line of letterpress, offset, and gravure presses ranging from small job printing units which cost $6 to thousand multicolor units priced at nearly $3 million. In addition, the company's folding and binding equipment and other machinery for the printing industry cover a wide span of uses and applications.

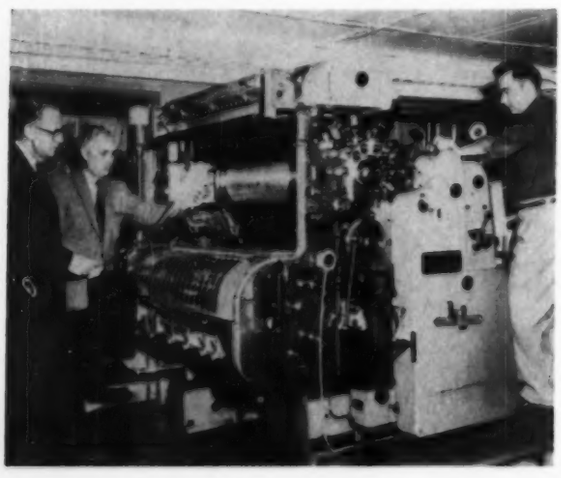
In a statement marking the merger, Chairman John E. Eddy and Pres. Robert C. Corlett said, in part:

"Newspapers, magazines, books, point-of-purchase materials, cartons, packages, labels, catalogs and pamphlets are now, and we believe will continue to be, the leading and universally recognized means to promote improved living standards and influence buying habits.

"Color advertising already has revolutionized many segments of the publishing and printing industries and publishing and advertising authorities concur in the belief that the use of color is at the beginning of a period of exceptional growth. This will put new demands on publishers and printers which M-G-D already is prepared to meet with high-speed letterpress, offset, and gravure presses printing from one to five colors for the commercial and book sections of the industry, and high speed roll-fed presses printing from one to six colors for the newspaper and magazine publishing segment of the industry.

"The unusual growth of prepackaging of merchandise has developed another market for various types of our equipment which prints and cuts and creases folding boxes of many sizes and shapes.

"Development of improved equipment for the Graphic Arts industry has led us into adaptation of some of the mechanical principles to the designing and manufacture of materials handling machinery which currently is finding acceptance in the metal trades industry. We anticipate progress in this field that will be important to M-G-D's overall objectives."



Offset Press Installed in Maine—A new Miehle offset press, designed for handling sheets up to 23 in. by 36 in. and for operating speeds up to 6500 i.p.h., has been installed in the commercial printing department of *The Kennebec Journal*, Augusta, Me. Shown from left to right with the press are: Paul Plummer, general manager; Sidney Welch, production manager, and George Drinon, offset foreman, all of *The Kennebec Journal*.

Run-of-Paper Color For Daily Newpapers

General considerations, initial conception, participation by all related departments, equipment requirements and the finished product will be discussed progressively

By VERNON R. SPITALERI*
**Research Director, Knight Newspapers, Inc.*

PART V—ENGRAVING

Many newspapers are now running process color—both editorial and advertising—but comparatively few are originating their own material. It is inevitable that many more newspapers will produce their own process color and here engraving plays an all-important role. We have already reviewed the part played by the photo department in producing color subject material (transparencies, one-shot camera, etc.) and also the part played by the color photo lab in preparing separation negatives and on through to the finished set of positive prints when three-color process is to be used. We will attempt to review briefly the basic factors involved to produce process color successfully in both three and four color.

Four-Plate Full Color Process

Since most of the basic principles apply to both three and four-color, let us first explore four-color as such. Procedures here are essentially the same as used in most commercial establishments with the principal difference being the speed required. Newspaper engravers must think in terms of hours contrasted to days and even weeks normally involved in commercial color reproduction.

Although contrary to most commercial practice, it is suggested that for newspaper work the color separations, principal masks, and highlight masks be produced with a good separation printer (discussed in detail in Part IV), thereby obviating the need for expensive additional equipment on the engraver's camera and also reducing the time required since exposure times would be considerably reduced. After the separation negatives, masks, etc., have been completed, continuous tone positives are made on either glass plates or films.

From the continuous tone positives screened negatives are made with the screen angles varied by use of a circular screen or mounting the copy at the proper angles on the copy board.

The balance of the engraving operation from this point is standard procedure known to all engravers although considerable more care is involved in producing good color plates.

Two methods are available to the engraver in photographing color copy. First is the so-called indirect method which permits retouching on the negatives and positives prior to making finished screen negatives. Using the second method, known as the direct method, all color copy including both transparent and reflection is processed substantially the same way with the principal difference being the manner in which the copy is handled and lighted.

Three-plate Full Color Process

We have already discussed the importance of careful controls on both materials and procedures during the photographic steps of color production. It is well to point up here the prime importance of controls in every step of the engraving operation, particularly when producing three-color process plates. Although there are many advantages in speed, quality, and economy when using three-color, the big bugaboo centers around the importance of strict control procedures throughout. *There is little leeway in three-color process and unless every step is carefully controlled the results will be less satisfactory.*

Both the color photo lab and the color engraving department should be air conditioned to the extent of humidity as well as temperature control. If possible, these two areas should be handled by the same conditioning system. This will minimize registration problems when transferring paper and film materials from one department to the other.

To insure accurate exposure of screen negatives, facilities for easy but accurate measurement of distance and angle of the arc lights should be incorporated as well as a stabilized current supply and light integrator unit.

There should be close temperature control for developing, fixing, and washing. Since it is usually impossible to develop all three negatives at the same time due to size limitations, it is particularly important to control agitation procedures as well as temperature. The processed negatives should be washed and dried by controlled procedures to insure good register.

A full 10-step gray scale (mounted on the copy board with each positive print) should be carefully recorded particularly at the screen negative stage. Special graphs are used to record the densitometer readings of the gray scales on each of the three sepa-

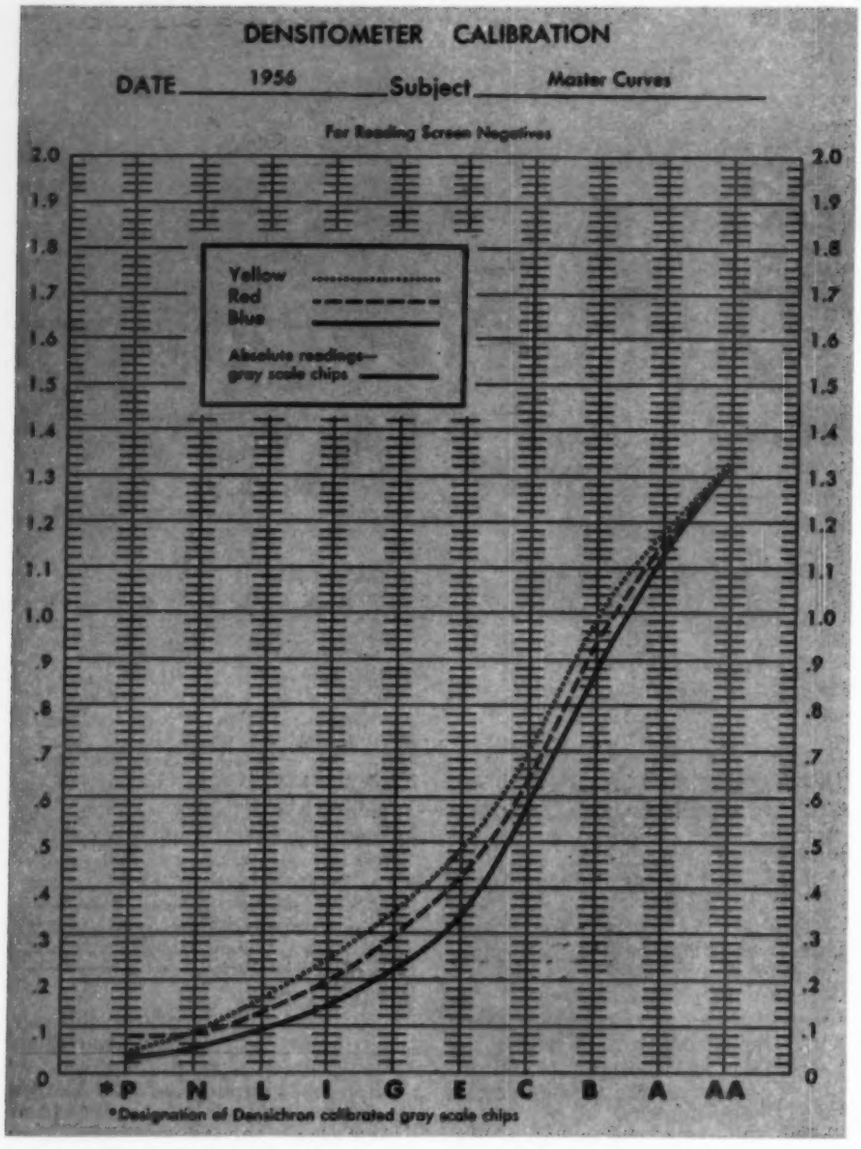


Fig. 12—At the Miami (Fla.) *Herald*, the photographer is instructed to produce the best possible set of positive prints, for ROP color printing, in full balance and with maximum possible detail recorded. The photographer also deviates from the traditional wide contrast range from deep black to high white so he may concentrate on the all-important middletone ranges where color brilliance and detail are principally recorded. Unbalance is achieved by purposeful distortion of the gray scales to varying degree as indicated in this miniature reproduction of this master graph.

ration negatives. Also, the finished graphs in each instance are checked against the master as shown in Fig. 12. Any deviations from the standard must be justified or the negative corrected at that point.

Screen Angles

Although not essential, if any volume of color work is done, a 75 line circular screen is recommended with the following screen angles used:

Three-plate full color: Blue 45 deg., red 75 deg., yellow 105 deg.

Four-plate full color: Black 45 deg., red 75 deg., yellow 90 deg., blue 105 deg.

Duotones: Black 45 deg., color 75 deg.

Unbalance Theories

Fundamentally it is the engraver's job to reproduce accurately the finished set of positive separation prints. Considerable experimentation at the *Herald* led us to discard the unbalancing system presently in vogue calling for 100% on the blue print, 80% on the red, and 70% on the yellow. Since this system arbitrarily calls for reductions in the yellow and red printers, we contend that this procedure, although producing acceptable blacks and grays, nevertheless weakens detail in important color areas and also does not permit maximum brilliance possible in the finished color result.

The *Herald's* present system calls for the photographer to produce the best possible set of positive prints in full balance and with the maximum possible detail recorded. The photographer is also permitted to deviate from the traditional wide contrast range from deep black to high white so that he may concentrate on the all-important middletone ranges where color brilliance and detail is principally recorded.

Procedures have been developed which permit taking up one or two steps at the high end of the gray scale to highlight whites by simple manipulations during exposure in the engraver's camera. Unbalance is achieved by purposeful distortion of the gray scales to varying degree as indicated in the master graph in Fig. 12. We have found this system affords us the necessary unbalance to produce true grays and blacks without loss of detail and brilliance.

In most instances, the color photo lab reverses all positive prints, obviating the necessity for the engraver using an image reverser.

Etching

All etching at the *Herald* is accomplished by modifications of the Dow high speed etching process with variations depending on halftone or combination requirements. The high speed etching process produces consistent, uniform, top quality halftones in 1½ to 2 min. per plate. Good stereotyping and printing require pyramid shaped, cleanly etched dots without shoulders and without undercutting. Burnishing of dots must be avoided as it also causes difficulty in molding and printing operations.

Etching depth requirements will vary according to the screen used. Assuming cleanly etched, well constructed dots, depth recommendations are as follows:

Screen	Highlight	Middletone	Shadow
75 line	0.005 in.	0.004 in.	0.003 in.
65 line	0.006 in.	0.005 in.	0.0035 in.
60 line	0.0065 in.	0.0055 in.	0.00375 in.
55 line	0.0075 in.	0.006 in.	0.004 in.

Above depths measured with conventional engraver's depth gauge. If a measuring microscope is used, subtract approximately 0.0005 in. from all the above readings.

For all our color work as well as black-and-white, 16 ga. magnesium is used. This metal has great dimensional stability even during hot molding operations, and also records 75 line screens very well due to a comparatively fine grain structure. New zinc alloys have been introduced recently,

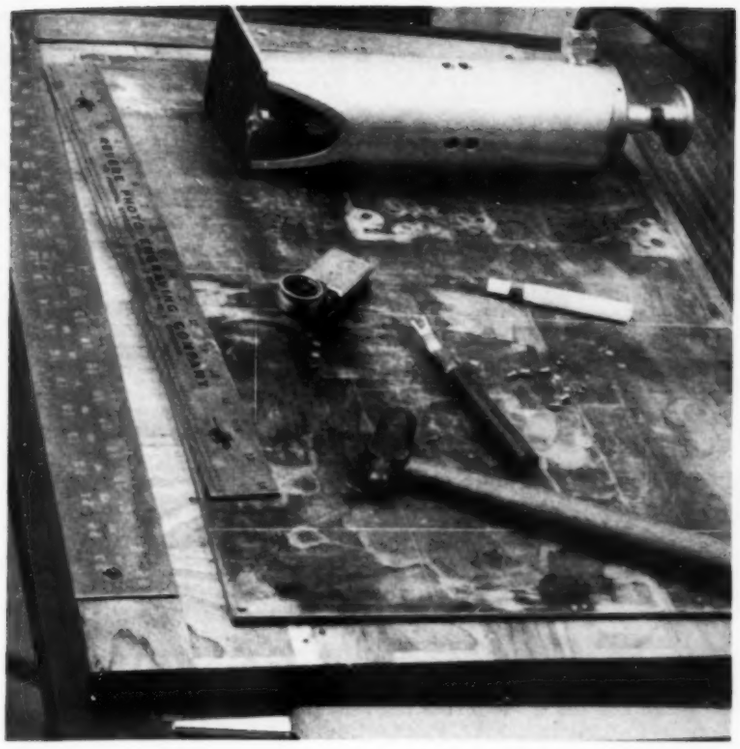


Fig. 13.—All of the equipment and tools required for the registration system employed in the engraving department at the Miami (Fla.) *Herald* are shown in this picture. Resting on the truck top is a wood block base to prevent undue wear on the drill. An 18 in. carpenter's steel square is mounted accurately on this wood block. Since the majority of color layouts are not prepared according to standard color dimensions, the color plates are mounted on the magnesium plate from an accurate layout furnished with each job.

On the wood base is resting a page size magnesium plate 0.150 in. thick. The electric drill modified to suit accurate drilling of register pin holes is fitted with a base plate at true right angles to the drill. The other tools are an 18 in. steel inch-calibrated scale, a ball pien hammer, pin extractor, 10X magnifying glass, an ordinary 10 in. flat file, wooden drift for sinking the register pins and a number of the register pins.

The *Herald's* register system makes use of an accurate punch such as Vandercook's precision 3/16 in. punch specifically designed for this purpose. The tool is used to punch the 3/16 in. holes in the dead metal areas of the printing plate into which fit the 3/16 in. diam. heads of the small register pins carrying the 1/8 in. center pin shanks. The 1/8 in. diam. register pin holes are drilled into the plate mounting base centrally in relation to the previously determined position of the 3/16 in. hole in the plate itself. A 3/16 in. diam. boss or shoulder on the bottom plate of the electric drill insures that the hole will be drilled accurately in the center of the 3/16 in. punched holes in each of the color plates.

Thus it can be seen that the drilling of the 1/8 in. diam. register holes in the magnesium cut mounting base can be done accurately provided reasonable care is exercised by the one doing the work. The boss or shoulder on the base of the electric drill is the means for locating the position of the 1/8 in. hole centrally of the 3/16 in. hole in the printing plate.

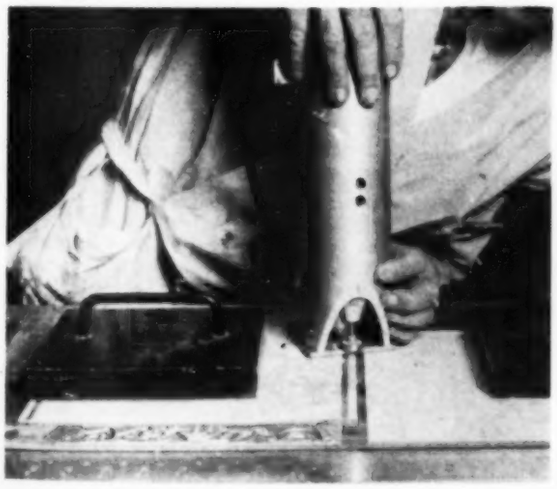


Fig. 14.—Here the modified electric drill has been placed in position over the dead metal area ready to drill the 1/8 in. register hole. Brief study will indicate to the reader that the *Herald's* color plate register system is quick and accurate.

however, which are reported to have good dimensional stability and can also be etched at comparatively high speeds.

Color Correction

Although there are numerous methods for color correction, it is generally agreed that it is preferable to reduce heavy undercolor and overprint photographically rather than use extensive re-etching procedures. If the color etcher must exceed routine correction to bring the plates into proper balance, he will experience considerable difficulty retaining the photographic values. Excessive staging and re-etching also leads to breakdown in the dot structure which faults frequently do not show up in the engraver's proof but make quality presswork virtually impossible.

In three-color process, so dependent on each of the colors to carry important detail, you invite trouble when making use of any staging, re-etching, and other handwork on the plates to correct for deficiencies. During the past year we have arrived at procedures in both photo and engraving which have not just minimized but completely eliminated handwork on the etched plates. Substantial improvement in rendering of detail and color brilliance so important in newspaper color has been the result.

Register Marks

Register marks should be located inside the subject and preferably at each extreme inside corner. When this is not possible they should be located at each outside corner and also at top and bottom outside centers.

Proofing

Pull full color and single color *wet* proofs on ordinary newsprint with proofing inks matched to newspaper color inks. Where possible the various color should be proofed within minutes to approximate as closely as possible the wet printing conditions in the pressroom. Never vary the intensity by carrying too much or too little ink on a proof since the pressroom cannot duplicate that condition. Color bars (preferably in varying tones from 25% to solid) should be carried across the entire width of all color proofs as a guide to uniform color proofing and also to indicate the amount of each color required.

Color Sequence

It is essential that the same color sequence be used for both proofing and printing and the following se-

(*Continued on Page* 113)

Printing Plant Planning— How It May Be Approached

Printing Equipment Engineer has always recommended that printing plant executives avail themselves of the services afforded by professional persons and/or companies with respect to architecture, plant arrangement and equipment layout for proposed new buildings.

The reason is that the average plant production executive is a busy person. His skills are in manufacturing operations. This being the case, he *knows* when work is going through the plant at snail's pace, in uneconomic manner, because plant enlargement is necessary, or because additional machinery may be installed. After giving a specific problem considerable thought, and perhaps arriving at what he considers the one best solution, usually, through his company, he secures the services of the professional architect or engineer. Another pertinent reason is that the professional people are in a position to anticipate building and safety code requirements. These men are always glad to work with printing plant executives.

However, there are many printing companies, the executives of which may wish to do some in-plant planning. Such planning relates to a specific manufacturing department. In fact, some plant production executives have set up a permanent planning department. In these instances, continuing study is made of equipment arrangement, workflow and materials handling. For this purpose, two dimensional templates, wood blocks, or actual miniature three dimensional models, usually scaled ¼ in. per ft. are used in a permanent layout. In this way, study of the workflow can be made from time to time to visualize the best result.

A number of equipment and/or supplies manufacturers offer advisory service for departmental planning. In most instances, these services are related to a specific production department. As is well known, many manufacturer and supplier representatives received their early production training in printing plants. Such activity usually is confined only to positioning of machines in a department and does not include power lines, lighting, plumbing, interplant phone or communications systems, etc.

Architectural and Engineering Services

Some of the individuals or firms offering architectural and/or plant engineering services to the Graphic Arts industry are as follows:

Dickerson, Robert W., architect and plant engineering, 2063 E. Fourth St., Cleveland 15, O.

Freedman, Olin E., 156 E. Erie St., Chicago 11, Ill. Consultant to management in the Graphic Arts and allied industries.

Ginsberg, William, Associates, 331 Madison Ave., New York 17, N.Y. Consulting engineers for newspaper plants and buildings.

Graphic Arts Industry, Inc., 1104 Currie Ave., Minneapolis 3, Minn. Management consultants and printing plant engineering.

Greer, Robert Royden, 5201 Wilshire Blvd., Los Angeles 36, Calif. Printing engineer and appraisals.

Main, Chas. T., Inc., 80 Federal St., Boston 10, Mass. An engineering and construction management organization with a division specializing in complete engineering services for printing plant layout and design, new structures or rehabilitation of existing facilities. Division is under direction of personnel experienced in Graphic Arts research, and printing and production management, including phototypesetting and composition.

Pereira, Morton L., and Assoc., 316 N. Michigan Ave., Chicago 1, Ill. Architects and engineers specializing in design of printing plants and newspapers.

Powers, Mark E., 111 W. Division St., Chicago 10, Ill. Industrial engineers, plant layout and production analyses.

Rockefeller, Jr., J. W., and Assoc., 56 Main St., Millburn, N.J. Consulting printing engineers.

Swift Engineering Co., 205 W. Wacker Dr., Chicago 6, Ill. Architectural and engineering services for newspaper plants.

Three Dimensional Models

Printing plant layout three dimensional models, planning boards and accessories are furnished by Model Planning Co. All types of Graphic Arts and industrial equipment metal models can be obtained. These are furnished the customer in the form of Model Planning Units. All miniature models are lacquered a realistic color. Model Planning Co., P.O. Box 44, Hillside Manor, New Hyde Park, N.Y.

Two and three dimensional plant layout methods are available from Visual Plant Layouts, Inc., Pennsylvania Ave. at River, Oakmont, Allegheny County, Pa.

Plant Planning Kits

We're Making Plans is the title of a booklet available upon request from Mergenthaler Linotype Co., Park Ave. and Ryerson St., Brooklyn 5, N.Y. The booklet is published with printed paper templates.

As an aid to printing plant executives who are planning equipment layout arrangements, Hamilton Manufacturing Co., Two Rivers, Wis., offers two items which are furnished gratis upon request. The usual procedure is to request these items from Hamilton dealers direct. The first of these two items is Form No. AP-97, which is a booklet in which are presented fundamental reasons, rules and practices of good equipment layout. The other item is Form No. AP-160, which is a printing plant layout kit consisting of a graphed sheet (scaled ¼ in. per ft.) for laying out basic floor dimensions, and a series of pamphlets, covering Hamilton and allied equipment. The Hamilton dealer will be glad to offer help in planning the plant. Hamilton Manufacturing Co. does not offer any form of architectural service, such as making building plans, or making general equipment layouts. The exception to the floor plan layout arrangement discussed above, insofar as equipment is concerned, Hamilton reports, is with respect to that company's new line of newspaper dispatch room equipment. Hamilton does not have pamphlets or anything of that nature for use by the printing plant executive. However, Hamilton will have one of its men make up custom arrangements of plans, based upon information received from the plant owner. This information is listed on a separate form (supplied on request) filled in by the printing plant. The filled in form containing the technical data is then sent to Hamilton Manufacturing Co. who then takes the basic floor plan and arranges the equipment to suit the condition.

"Sam will be out in a minute. He's washing up the press."

Equipment Layout Services

A number of equipment and supplies manufacturing companies offer layout services. Usually, these services are furnished through company sales representatives. In most instances, company representatives have worked in plants. In addition, their travels have brought them in contact with many different plant conditions. A number of companies whose representatives will assist you are as follows:

American Type Founders, Inc., 200 Elmora Ave., Elizabeth, N. J., maintains an advisory planning service to help customers choose the right kind and amount of new equipment. Service covers most production areas of commercial printing plants and newspaper composing rooms. Consultation and/or layout presentations are available for plans involv-

ing new equipment required by an existing plant or by new plants just starting. A part of this service is development of comparative costs on presswork for various sizes and styles of presses, based on a group of typical sample jobs. ATF makes a nominal charge for these services; charge is based largely upon amount of new equipment purchased.

Burgess Cellulose Co., Freeport, Ill., does not have anything in the way of layouts. All the company's service men, however, are experienced stereotypers. They will assist in layout work and planning.

Chandler & Price Co., 6000 Carnegie Ave., Cleveland 5, O., has never gone into the subject of plant layouts. The company is glad to supply information and floor plans of any of its equipment. C&P dealers are prepared to make layouts and supply other information when the printer applies to them.

Chemco Photoproducts Co., Inc., Glen Cove, N.Y., furnishes advisory service for complete photomechanical operation, including plans in diagram form. Company does not use scaled templates, blocks or three dimensional models.

Orville Dutro & Son, Inc., 117 W. 9th St., Los Angeles 15, Calif., designs and manufactures printing presses and allied machinery for the business forms industry. Our people make recommendations of the physical machinery installation, carbon and paper procurement, types of adhesives and inks best suited for rotary presses, as well as accessory machinery.

In a letter received from Howard Flint Ink Co., Detroit 9, Mich., it is stated: "For those publishers planning on receiving ink by tank truck, our engineering department has blueprinted the ideal bulk ink handling system. Blueprints of this equipment and layout are sent to publishers upon request."

Representatives of Foster Mfg. Co., 13th and Cherry Sts., Philadelphia 7, Pa., will confer with plant production executives regarding custom-built composing room storage equipment. Tentative layouts and sketches to meet specific problems are prepared.

General Plate Makers Supply Co., 5441-55 N. Kedzie Ave., Chicago 25, Ill., reports that company furnishes several technical men to the photoengraving, offset and rotogravure trade. These men are practical craftsmen. No set layout is offered. There are individual problems in each shop which makes it necessary to send in a representative to advise or counsel regarding improvements before making suggestions. Company services cover the platemaking departments.

Goss Printing Press Co., 5601 W. 31st St., Chicago 50, Ill., provides an advisory service relative to press and stereotype equipment layouts.

Huck Company, 37 Wall St., New York 5, N. Y., provides a complete plant planning and improvement service at its regular consulting rates. Chiefly, this is done with respect to plant equipment with a resulting report on the economics involved and recommendations on improving production, either with new machinery or modifications of existing machinery or methods. Services cover entire production area, but the firm specializes in pressroom equipment. If necessary, diagrammatic layouts are furnished with which can be included scaled templates or three dimensional models.

Interchemical Corporation (IPI), Printing Ink Div., 67 W. 44th St., New York 36, N.Y., supplies news ink users with advisory and consultation service for installation of news ink tanks, with pumps and feed lines to presses. This service includes scale layout drawings, detailed prints of tank and pumping stations and piping diagrams.

Ludlow Typograph Co., 2032 Clybourn Ave., Chicago 14, Ill., makes its men available to prospects and users of its equipment for advice on layout. This service is limited to the composing room, particularly to the Ludlow and Elrod areas.

The C. M. Kemp Mfg. Co., 405 East Oliver St., Baltimore 2, Md., offers planning services for metal casting equipment in stereotype and composing departments. In the stereo department, recommendations for one, two or more pieces of casting equipment are made. Provision for future expansion is included. Based upon present and expected requirements a layout of composing metal melting equipment is provided.

Macbeth Arc Lamp Co., 141 Berkley St., Philadelphia 44, Pa., maintains an advisory service to provide custom setups and equipment for specific lighting applications generally in the plate and camera departments. For instance, Macbeth designed lighting equipment for the carbon tissue printing department of a large gravure printer together with layout of equipment for the room. Special lamps have been designed also for photocomposing, camera and other platemaking equipment to meet customer requirements.

Manhattan Industrial Contracting Co., Inc., 202 E. 44th St., New York 17, N.Y. This organization consists of equipment riggers, truckers and technicians who dismantle, move, rig and reassemble printing presses and all kinds of equipment (smallest to largest) for newspaper and printing plants. Company maintains a 24 hr. repair and service department. Entire plants moved as well as single pieces of equipment.

Master Etching Machine Co., Wyncote, Pa., upon customer request, furnishes suggested layouts of photoengraving departments; also, upon receipt of information regarding floor space and equipment intended to be used, several layouts will be prepared and submitted to customer. Firm limits its activities to photoengraving departments.

Nolan Corporation, Rome, N.Y., offers planning assistance in renovating or redesigning metal remelting departments. Stock models or kits not used. When a new metal remelting system is contemplated, field engineers will work with those concerned to ascertain type of equipment and most efficient layout. Prints are then drawn and submitted with firm quotation for study.

Vandercook & Sons, Inc., 3601 W. Touhy Ave., Chicago 45, Ill., does not maintain a plant planning department as such. The firm, however, offers suggestions as to the most practical equipment arrangement to photoengravers, electrotypers and others using Vandercook equipment.

Western Newspaper Union, general offices at 310 E. 45th St., New York 17, N.Y., reports: "In 28 of our merchandising branches we offer plant planning service at the request of customers. Service varies with nature of printing plant. We find it helpful to use Hamilton Mfg. Co.'s scaled templates. On request, we will supply such templates to a customer in case he wants to do his own layout. We offer the foregoing services only in the areas normally contacted by our merchandising branch offices. Should we receive an inquiry from a plant outside our normal areas we gladly refer such inquiries to a source near them."

Wirstyer Corporation, 230 Warburton Ave., Hawthorne, N. J., furnishes an advisory service to the newspaper and printing industry. For handling printed material in the plant, the company will provide engineering drawings, economic surveys and specific recommendations.

Wood Newspaper Machinery Corp., Plainfield, N. J., does planning work for both press and stereotype equipment, such as space requirements, arrangements and foundations. The company also has scaled templates for stereotype layouts and three dimensional models for press arrangements. These models are furnished on a loan basis for the purpose of demonstrating various web combinations.

Flexographic Printing

By MR. FLEXOGRAPHY

VIII.—Men and Machinery

The nature of my work brings me into direct contact with the personnel and mechanical equipment of many printing plants. During these visits, proper business ethics dictate that I be cognizant keenly and continuously of my position as *invited guest,* otherwise a necessary element of mutual confidence cannot be secured. Views must be completely objective and pertinent to the problems of the moment.

However, we "guests" would be robots if we did not receive definite impressions from each plant we enter. Since we are seeking the answer to a problem, we instinctively keep our eyes and ears open. Every plant has a reputation. We, quite naturally, often come face to face with its real character. The difference is that a plant's reputation is what other people believe it to be, while its character is what it really is. If we enter a plant that is physically shipshape and exudes efficiency, we breath with relief for we know that our job will be easier no matter what regulations may be in force. To sum it up, it's much more pleasant to follow channels already established than it is to forge our own where none exists.

What Makes a Plant Efficient?

I'd like to waive the claptrap of ifs, ands, and buts regarding more modern equipment and procedures, and present my argument that the best machines and systems in the world are as good as and no better than the people who operate them! I've seen some men run what might be considered a horrible excuse for a press, work with inadequate supplies and somehow or other, perform the miracle of getting the job out promptly and profitably. I've seen others, when confronted by an infinitely lesser problem, shrug their shoulders and say: *"Not me—I'm not paid for that."* It would be the height of idiocy to expect any extra effort on the part of the latter workers.

What then causes this difference in attitude among workers? It's a breakdown of the ties that bind people together. You may call it human wear or human fatigue. We know all about plate wear and metal fatigue. If cylinders, idlers, bearings or motors give us trouble, we take immediate steps to rectify the condition. However, we sometimes forget that we've been aware of fatigue in the human long before we ever thought of applying this *ailment* to machinery.

Problems at home, or at work, disagreements, uncertainties, discouragements affect a person's attitude toward his work in direct ratio to his ability either to cope with them successfully or learn to live with them. One might say almost immediately: "Everyone has problems. I've got mine; he's got his. We all have to work out our own as best we can." True, but I'll be quite mercenary about it. If we're paying and repaying for a person's attention to his job in the form of a weekly pay check, it might be well to try and get the most for our money, especially since the tendency today is just the opposite. Unlike machines, which are fairly constant, there is nothing more inconstant nor unpredictable than the human being. Therefore, in order to safeguard our investment and to protect ourselves from weekly over-payments, we must develop some kind of interest in our most fluctuating assets—and interest—on *both* sides of the time clock.

This does not mean that an employer or superintendent should pamper his men so that one might ask, "Well, when does the work get out?" It merely requires that we keep alert constantly for a "squeaky bearing" and then give a little attention.

Which is cheaper?

(To Be Continued)

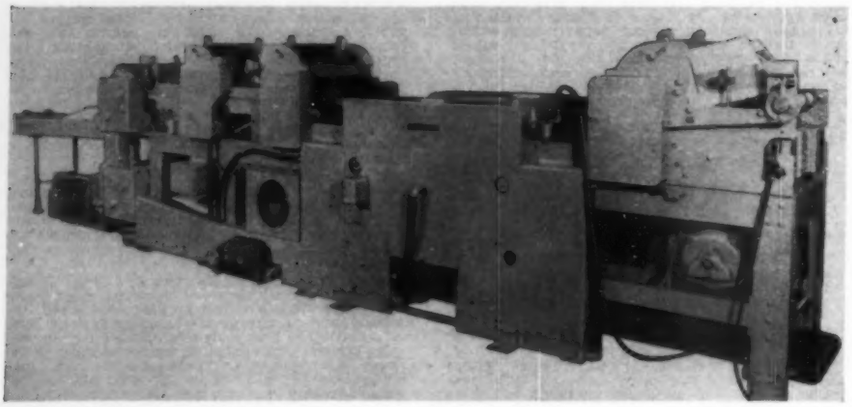


Fig. 1—Overall view of new Dexter-de Florez straight line newspaper stuffer. Openers feed from right hand box into stuffing wheel (behind name plate panel). Inserts feed into openers from two boxes to left of wheel. Assembled papers are discharge onto delivery conveyor (below and to left of insert boxes). Memory device beneath insert box nearest stuffing wheel, rejects papers having missed or double sections without stopping the machine. Reject conveyor is beneath drive motor (right).

Straight Line Newspaper Stuffer

The Dexter Folder Co.'s straight line newspaper stuffing machine collates up to 12,000 papers per hour. The machine is of straight line construction (Fig. 1). The design is such that new feeding boxes may be added to existing units. The machine may be serviced from either side.

Stuffing operations take place in adjoining pockets of a stuffing wheel. Newspaper cover sections, or openers, feed into the V shaped pockets from one side and inserts from the other (Fig. 2). Assembled papers are discharged onto a delivery conveyor which runs beneath the insert feeders.

In operation, opener sections are placed on edge in a feed box, bolt end down. Suction cups pull the bolt of the foremost opener away from the stack so that uniformly accelerated reciprocating grippers can grasp and pull it into driven rollers. In turn, the driven rollers transfer it to a conveyor from which it feeds, bolt end first, into one of the pockets.

As the wheel revolves, a suction cup engages and pulls back one cover of the opener and grippers clamp it against the side of the pocket. This allows the remaining pages to open by gravity, with an air assist. As the wheel turns further, inserts feed into the opened sections from boxes on the other side of the wheel. Assembled papers are ejected into a collecting fan which lays them on a Cutler-Hammer conveyor for delivery to the next operation.

Included in the machine is a novel memory device which may be used to reject papers having missed or double sections without stopping the machine. As each opener and insert leaves its feed box, it passes through a caliper. Calipers activate solenoids which are mounted adjacent to a disk which revolves in time with the stuffing wheel. The outer periphery of the disk is fitted with pins, each of which can cause the ejector of a given pocket not to function. When a caliper at a given feeder detects a missed or double, it activates its solenoid and the solenoid knocks in the pin passing before it at the moment. This pin will deactivate the ejector at the pocket which will receive the miss or double. The improperly stuffed paper will not be ejected onto the delivery conveyor but will travel further around in the pocket and drop out onto a reject conveyor.

Papers are mechanically counted, rejected papers being automatically eliminated from the count. The machine kicks out every 25th or 50th paper and thus minimizes manual counting in making up bundles.

Machine arrangement may include one box for openers and up to five for inserts. A three-feeder machine is 41 in. wide by 26 ft. long, including delivery conveyor. Each additional feeder would add 46 in. length.

When particularly bulky sections are being fed, auxiliary boxes, or dual feeders, may be mounted at any of the feeding stations. Boxes will feed alternately and operate at half speed, thus allowing the attendant ample time to keep the machine loaded. With one box only, bulky sections could feed off more rapidly than the operator could replace them. For more information please circle No. 260 on the Reply Postcard.

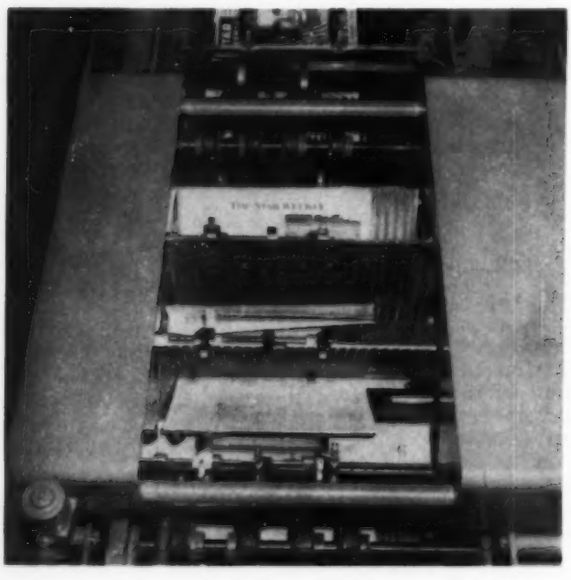


Fig. 2—Top view of stuffing wheel. Direction of travel is clockwise. Openers feed into wheel (bottom of picture), and are opened by means of suction cups, gripper bars, gravity and air. Inserts feed into openers from opposite side of wheel. Assembled papers are discharged onto delivery conveyor beneath the insert feeders.

NAPL Registrants To Receive Book

The 20th Anniversary Edition of *The Lithographers Manual*, recently announced by Waltwin Publishing Co., will be given to every registrant at the NAPL convention and exhibit, Chase Park Plaza Hotel, St. Louis, Mo., Sept. 11-14, 1957.

In the manual all phases of lithography are covered, each of the 20 chapters corresponding to one area of activity. Editorial studies present advanced thinking in each field. Materials and equipment resources are presented by manufacturers.

Book is published by Walter Soderstrom, executive vice president of the National Assoc. of Photo-Lithographers, and edited by Victor Strauss, Graphic Arts writer and consultant.

The 20th Anniversary Edition will be a hard bound book, produced by lithography, illustrated in line, halftone and color. Price: $15.

Unity Press Finds Economical Way To Demount Scrap Printing Plates

In the January issue, *Printing Equipment Engineer* published a request from several readers as to how thermoplastic mounted plates could be separated economically from wood bases. The purpose, of course, is to enable printers to dispose of the demounted plates as scrap to metal buyers who refuse to accept them in mounted form.

One of the most informative answers was that received from David Van Leer, assistant treasurer, Unity Press, Inc., Holyoke, Mass.

Van Leer tells us that all copper, zinc and electrotype plates coming into Unity Press are adhesive mounted. An easy and economical way to demount the plates was found. Unity Press operates a Nolan square model electric remelting furnace. Metal is remelted every other day. While the pot is heated during the remelting operation, half a dozen plates are laid face down on top of the furnace cover.

The adhesive becomes soft from the heat and the plates come off the wood blocks easily, either with a broad blade screwdriver or small prybar.

Between the pouring operation and while the pigs are cooling, the remelt man places another half dozen plates on the cover, finding time to remove quite a number of plates.

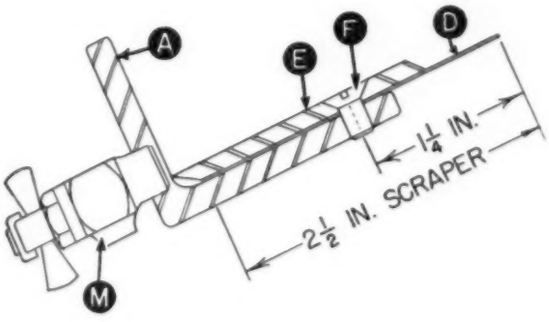


Fig. 1—Cross section diagram shows construction of ATF offset press washup device at approx. center part of trough near drain cock.

ATF Offset Press Washup Device

By A. W. SEJECK*

**Senior Design Engineer, American Type Founders, Inc.*

The ATF washup device now used on the standard sheet fed offset presses in the ATF line, was developed after considerable design and field testing. The device may be applied to old style Big Chief and Chief offset presses. It is furnished as standard equipment on new ATF offset presses.

Referring to cross section diagram, Fig. 1, the washup device consists, of the angle iron trough *A*, scraper blade *D*, scraper holding plate *E*, scraper holding plate screws *F*, and drain cock *M*.

There are no sharp edges inside the washup trough. The trough may be cleaned readily. It is light in weight to enable the press operator to handle the trough easily. The complete trough mechanism is assembled with a sealing compound at all joints and screw threads to make it leak proof. The end retainers *G*, (Fig. 2) are made of a special leather for flexibility, and the end retainer plates *H* are made of flexible spring steel. The purpose of the end retainers is to build up the ends of the scraper blade *D*, Fig. 1, so that when washing up the press, the dissolved ink is kept from working over the edge of the scraper blade and dripping on the press. Also by not extending the retainer plate *H*, out to the edge of the scraper blade, and by clamping the front edge only to the end retainers *G*, (Fig. 2) the outer edges of the scraper blade remain resilient and will in turn clean up the ends of the large ink drum more effectively.

The thin, resilient scraper blade *D*, (Fig. 1) is 1/32 in. thick. The blade contacts the ink drum at an angle to produce the best washup results. This contact angle was established by test and found to change with each change in ink drum diameter. It is the angle where the scraper blade under the proper pressure is as tangent to the surface of the ink drum as possible without over-riding. Thus the smaller the diameter of the ink drum, the more critical the blade contact angle.

Resilient Scraper Blade

While designing the device different materials were tested for scraper blades. The material used in the ATF scraper blade is Synthane LE with a phenolic binder. In this type of material are incorporated excellent mechanical and machining characteristics and moisture resistance.

The scraper blade is made so that if the contact edge wears or is damaged the blade can be turned around to bring a new edge into use, similar to a double edged safety razor blade.

The drain cock *M* is provided with a large opening to minimize clogging. It will drain off the majority of the dissolved ink, but the trough should be cleaned further by wiping it out with a rag.

The adjusting knobs *R*, Fig. 3, are made with a crank style grip *R1* because it was felt that at most times during a press washup the pressman's hands would not be too clean and a provision for positive grip on the knob would be essential.

Washing the Rollers

To use the washup device the following procedure should be used:

With press impression off, start the press and run at approx. top speed. On the new ATF Super Chief press there is a washup control button located at the delivery end of the press which automatically runs the press at a predetermined washup speed. It will change the press speed from slow down speed to the running speed of the press as set on dial whenever the washup switch is turned to *Washup*.

There is also a washup lock plunger connected with the feeder clutch handle to prevent engaging the feeder while the press is bing washed, and keeps clutch handle in *Off Impression* position during washup. The plunger should be engaged in the hole in the feeder clutch bushing during the time press is run on washup switch.

After the press has been run on washup, turn the switch back to *Run* or *Jog* and pull the washup lock plunger out to disengage feeder clutch handle. Many pressmen prefer to wash the press at a speed of 6000 i.p.h.

The washup switch is also used when readying the press before running a job to moisten the dampeners and when checking sheets run from the feeder and through the press at

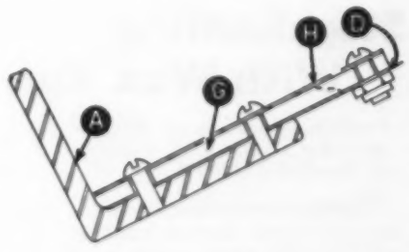


Fig. 2—Cross section diagram of ATF press washup device at extreme left and right of trough near the brackets which hold device to the press.

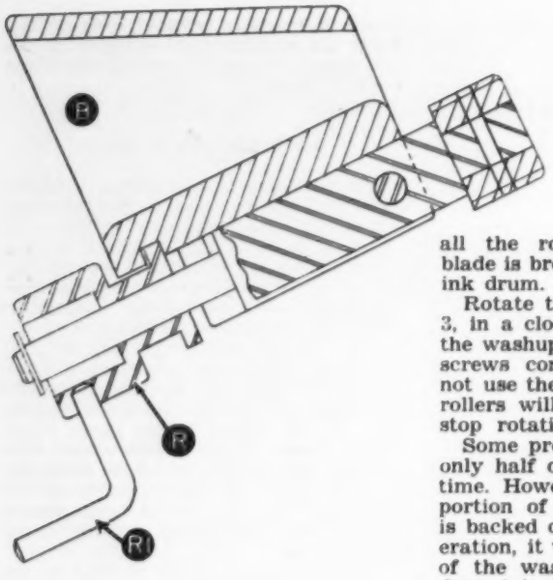


Fig. 3—Cross section diagram showing one of two handle brackets *B* and scraper blade adjusting knob *R*.

operating speed, without putting the press on impression.

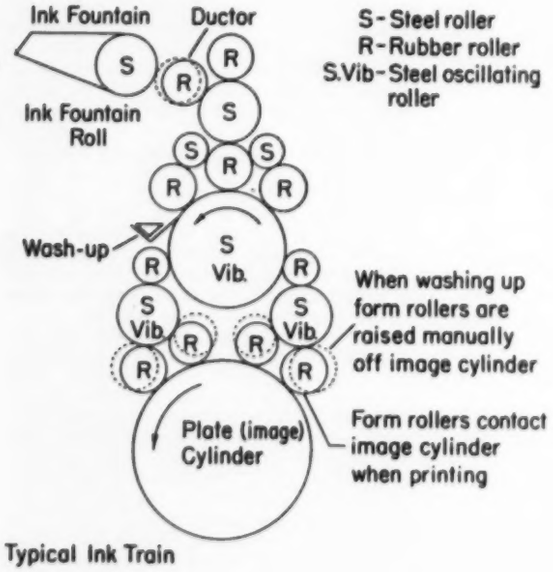
Do not forget to lock the feeder clutch handle with the washup lock when using washup switch for washing press. Wear on feeder clutch and down time can result.

Now pour a small amount of mineral spirits on the top inking rollers. This will run through the entire inking system and loosen the ink. The washup fluid should be given a chance to penetrate the ink film on all the rollers before the washup blade is brought into contact with the ink drum.

Rotate the adjusting knobs *R*, Fig. 3, in a clockwise direction and move the washup device until the adjusting screws contact the fixed stops. Do not use the solvent excessively or the rollers will skid, slip and eventually stop rotating.

Some pressmen prefer to wash up only half of the ink roller train at a time. However, when doing this, the portion of the blade not being used is backed off. During the washup operation, it will be noted that the ends of the washup blade weave up and down into the stroke of the ink drum. This motion cleans up the extreme ends of the ink drum without scoring them.

After the washup is accomplished, back off the washup device and drain the excess washup fluid now in the trough using the cock *M*, Fig. 1, and a disposable container of some sort. The washup device is so arranged that it may remain on the press at all times and each individual ink roller may be removed, providing the washup device is backed off to the outer stop position.


Ink Fountain
Ductor
S - Steel roller
R - Rubber roller
S.Vib - Steel oscillating roller
Ink Fountain Roll
Wash-up
When washing up form rollers are raised manually off image cylinder
Form rollers contact image cylinder when printing
Plate (image) Cylinder

Typical Ink Train

Fig. 4—Referring to typical ATF offset press ink train diagram, it is noted that ink form rollers do not contact plate cylinder during press washup. It is apparent that ink and washup fluid are continually in motion from top of ink train to form rollers at the bottom. As the ink is dissolved it is accumulated in the washup trough. It is necessary for the washup fluid to clean all rollers including the bottom-most form rollers, and the contact of each turning roller in the train provides the means for circulating and re-circulating this ink fluid film, until it has all been collected in the washup trough.

Stop Scuffing With Wax Run

(Published through courtesy of Lithographic Technical Foundation, part of Research Report No. 37.)

Scuffing is a troublesome problem for many carton printers. The printed boxes rub against one another in shipment or in being handled and the ink rubs off. The customer's complaints then come back down the line and land in the lithographer's lap. He, in turn, usually pleads for an ink that will resist the abrasion. But, unfortunately, a litho ink that will take repeated abrasive rubbing just doesn't exist. According to tests made at the Lithographic Technical Foundation, scuff-proof inks are better than ordinary inks, but only to a degree.

However, there is a treatment that will prevent most cases of scuffing. This is the application of ordinary self-polishing floor wax to the sheets. These are water-emulsion waxes. When applied to paper, the water goes into the sheet leaving the wax on the surface. A separate run through a press is required to apply the wax but if the customer wants scuff-proof work, he should be willing to stand the extra cost.

Wax is applied to the printed boards after the ink is thoroughly dry. LTF has found that any good grade of water-emulsion, self-polishing floor wax will work. LTF suggests that you dilute it two or three parts of water to one part of wax and put the solution in the water fountain on the press. Put on a freshly grained plate that has been counter-etched and gummed. Then, with the ink form rollers lifted, start the press and run the sheets. The dampener setting determines the amount of wax deposited on the sheets.

Only a very thin film is needed to prevent scuffing. It should not be so heavy that it will change the color of either the inks or the paper. Experiment a little to find out just how much to apply. Each job is different but here are some general rules-of-thumb from LTF that may help.

Uncoated papers usually require a heavier film of wax than coated papers. Start out with a two parts water: One part wax mixture for uncoated paper and a 3:1 mixture for coated stock. After you have a few hundred sheets, use these LTF tests to see if you are putting down too much or too little.

You can test to see if you are using enough with a piece of white paper. Hold the paper in your hand, rub it on a waxed sheet, and then inspect it. If the ink rubs off on to the paper in your hand, you don't have enough wax on the sheets. If no ink rubs off, then you know you have enough. If this is the case, you should then test to see if there is too much wax on the work.

This test is also very easy. Place a 3 in. or 4 in. lift of waxed boards on a flat table. With your fingers or the flat of your hand, push the entire stack forward for a few inches and then stop. If the boards keep on sliding forward, there is too much wax on them. If the boards stop moving forward when you stop pushing, they are OK.

The press inking rollers are off the plate but revolving during the waxing process. If they are allowed to run dry they may heat up. LTF suggests that you put a little laketine on the rollers during the run to prevent this possibility of overheating.

The waxing technique was originated in Kansas City by Charles Beutner to solve a serious problem of scuffing on greeting cards. It is now being used successfully by a number of lithographers in other parts of the country.

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LEADERSHIP THROUGH RESEARCH

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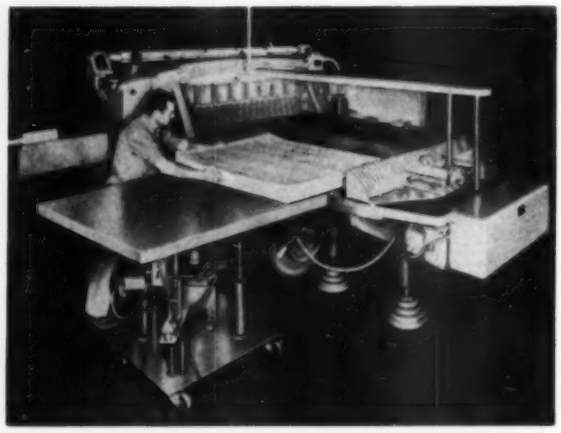
CARLEY RICE PRUYNE

New Intertype Representatives—The following have been appointed representatives of Intertype Corporation. William F. Carley will serve the Central Pennsylvania territory; Tom M. Rice has been assigned to cover North Carolina and Virginia; and Ernest L. Pruyne will represent Intertype in Eastern New York State. Pruyne, formerly mechanical superintendent of Ocean City (N.J.) *Sentinel-Ledger* succeeds Marvin L. Van Keuren who has retired after 30 yrs. service with Intertype.

Rear Loading Cutter—Colourpicture Publishers, Inc., Boston, cuts picture postcards on a rear loading 55 in. Lawson Series V-65 Electronic Spacer Cutter. The cutter is equipped with electronic spacing device. The skid of work is placed at the rear of the machine. The side plate on the back table is removed and the back gauge moved to its rear position. The cutter is loaded. While one lift of postcards is being put through a series of cuts and trimouts, the next lift is being prepared on a Brackett jogger located at the rear of the cutter. After the last cut has been made, the back gauge automatically returns to rear position. While the operator removes the finished cards, his assistant, who has been tending the jogger, slips the next lift onto the rear table.



Illinois Association Elects—At the recent annual meeting of Graphic Arts Assoc. of Illinois, John H. Goessele, jr., C. O. Owen & Co., Maywood, Ill. printing firm, was elected president. Goessele is shown being presented a gavel by Miss Chicago (Sandra Stuart). Speakers at the meeting included Reuel D. Harmon, PIA president, and Col. John Slezak, board chairman, Kable Printing Co., Mt. Morris, Ill.

To Institute Research

Walter T. Flower of the Flower Steel Electrotype Co. of New York, N. Y. was named by Pres. Elmer M. Schwartz of the International Association of Electrotypers and Stereotypers to direct the establishment and operation of a new research and development program for the commercial electrotyping and stereotyping industry.

Named by Flower to assist in getting the program underway are: Horace W. Haydock, Royal Electrotype Co., Philadelphia; Raymond E. Kreber, Van Bolt-Kreber Electrotype Co., Columbus, O.; Milton J. Rectanus, Service Electrotype Co., Pittsburgh, Pa.; Carl N. Becker, Becker Electrotype Co., Milwaukee, Wis.; Chester T. Scott, New England Electrotype Co., Boston; Elmer M. Schwartz, Jr., United Electrotype & Stereotype Co., Chicago, and James E. Thomas, Capital Electrotype Co., Albany, N. Y.

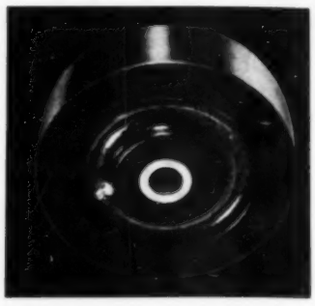
This move by the electrotypers, it is announced, will in no way affect the International Electrotyper's original effort to have an industrywide letterpress research organization established.

Liquid Wax Handling Equipment

Plants using large quantities of wax for production coating and sealing will be interested in Stapco liquid wax systems, manufactured by Stainless Products Corp. A typical liquid wax installation consists of an insulated tank, or tanks, in which coils and automatic controls maintain the proper wax temperature. Additional equipment includes water sumps, water decanting valves, thermometers and gauging systems for inventory control. Water for heating coils is provided by automatic water heaters using steam from plant lines. Liquid wax passes through strainers and heated lines under pressure to points of use. For further information, please circle No. 274 on the Reply Postcard.

Plastex Wheel for Heavy Loads

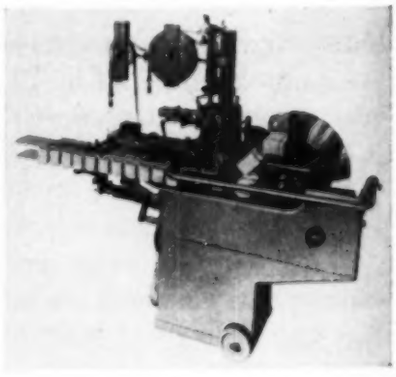
Molded plastic wheels, under the trade name of Plastex, are offered by The Hamilton Caster & Mfg. Co. The molded wheels are made of macerated heavy weave canvas duck,



impregnated with phenolic resin compounds. The material is said to resist corrosion from mild acids, oils and greases. It is also said the wheels are floor protective under extreme loads, comparatively noiseless and shock absorbent. Wheels can be used in temperatures ranging from —40 deg. to 210 deg. F. Sizes range from 3¼ in. to 12 in. diam. Load capacities are from 300 lbs. to 3000 lbs. Wheels are equipped with Hyatt-type or Timken tapered roller bearings, and Zerk pressure grease fittings. For further information, please circle No. 275 on the Reply Postcard.

Bundling Machine

Potdevin International, Ltd. will be the U.S. sales agents for the Jagenberg-Werke bundling machine, according to J. Henry Richmond, Potdevin president. Various size products such as cartons, books, envelopes, labels, cardboard or papers are bundled by changing dial settings. A strip of plain paper encir-



cles the bundle and a short piece of gummed tape seals the two ends of the strip. With the exception of the feeding, the bundling operation is automatic. The machine is claimed to be operated at the rate of 25 bundles per min. Size range of bundles is: length 2¾ in. to 11 in., width 1⅜ in. to 6¾ in., heights 2 in. to 3½ in. For further information, please circle No. 276 on the Reply Postcard.

PATENTS

For The GRAPHIC ARTS

Covering patents issued Dec. 4, 11, 18 and 25, 1956.

All new patents for the Graphic Arts are reported exclusively for *Printing Equipment Engineer* by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. *Printing Equipment Engineer* is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Composing Room:

PHOTOCOMPOSING JUSTIFYING APPARATUS

This apparatus is applicable to a conventional typewriter and permits correct composition and justification and provides an exposed film carrying the completed copy. A written record visible to the operator is provided, in order that the composition may be checked prior to exposing the film. Patent 2,772,613 by Woodbury Williams.

TYPOGRAPHICAL COMPOSING, CASTING AND DISTRIBUTING

There has been a growing demand for machines operating at a higher speed, especially in those equipped with tape-operated keyboards. This invention practically doubles the speed of machines of existing general design. A continuously rotating star wheel receives the released matrices from the assembling belt. Many other improvements are described. Patent 2,774,463 by Louis Rossetto, Paul Hilpman and William B. Abbott, assigned to Mergenthaler Linotype Co.

ASSEMBLING MECHANISM FOR TYPOGRAPHICAL COMPOSING MACHINES

The rotary star-wheel is so mounted that, as a line is being composed or stacked in the assembling elevator it will be capable of overrunning its driving spindle under the impact of a descending spaceband or matrix, if the timing so requires. This prevents some prior difficulties in Linotype machines, such as failure of the matrices or spacebands to seat properly upon entering the assembling elevator. Patent 2,774,464 by Paul Hilpman, assigned to Mergenthaler Linotype Co.

LINE STOP FOR TYPOGRAPHICAL CASTING MACHINES

This improved line stop comprises a pair of thin abutment plates shaped and spaced for sliding movement of the first elevator, and an elongated spring wire element which slides in the spaceband grooves of the first elevator. This U-shaped wire has the free ends of its two leg portions united to the abutment plates and its loop connection exerts the desired frictional engagement with the matrix grooves. Patent 2,774,465 by Charles G. Inglish, assigned to Mergenthaler Linotype Co.

TYPOGRAPHICAL SLUG CASTING MACHINE

Automatic adjustment to the size of a slug being ejected from delivery platform to produce a chute wall of a minimum optimum width is accomplished by using a movable spring plate which cooperates with a leaf spring secured to one side of the plate and forming one side of the chute. Patent 2,775,340 by Melvin R. Gieg.

PUMP MECHANISM FOR TYPECASTING MACHINES

For use in existing Monotype typecasting machines, this invention prevents the leakage of metal between the seating in the mold and the pump nozzle. The pump body elevating levers are given accelerated movement by their operating spring during the final stage of their travel to seat the pump nozzle in the mold slightly in advance of the operation of the pump piston. Patent 2,775,009 by Edward C. Meldrum and Alfred E. Roper, assigned to The Monotype Corporation, Ltd.

PHOTOGRAPHIC TYPE COMPOSING APPARATUS

This invention refers to a copending application, Serial No. 770,320, which uses control slits blocking or admitting a light beam to a photocell to generate trigger cells. Fine precision was the aim in this patent. The present invention uses the same trigger impulse, instead of a rotary timing switch, as a coarse control for timing of character projections. It is simple in construction and greatly reduces maintenance costs. Patent 2,775,172 by Rene Higonnet and Louis Moyroud, assigned to Graphic Arts Research Foundation, Inc.

Platemaking:

REGISTERING GAUGE

For color separation work and masking steps in connection with platemaking by photoengraving, this gauge is useful as a holder of a transparency and sensitized material to be contact-photoprinted. The gauge has at least two adjustable detents by which the gauge may be duplicated and wear adjusted. Patent 2,772,485 by Herbert Gelb, assigned to Joseph Gelb Co.

POSITIVE DIAZOTYPE PRINTING PLATES

In preparing a plate capable of conversion to an offset printing plate, a hydrophobic layer is applied to plate base, which layer consists of a copolymer of vinyl methyl ether and maleic anhydride. There is an overcoating consisting of a water-insoluble, alkali-resistant resin and a water-insoluble light sensitive diazo oxide soluble in a liquid solvent, which is selected from the class consisting of aliphatic esters, ketones and alcohols. Patent

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PRINTERS EQUIPMENT

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2,772,972 by Clifford E. Herrick, Peter T. Woitach, and Edward J. Trojnar, assigned to General Aniline & Film Corp.

SHELL HIGH TRIMMING ATTACHMENT

This device converts a standard printer's saw to trip a slug or piece of handset type for mounting in a space which has been routed out of a type high stereotype cast. It is especially useful in small print shops for making revisions in copy accurately and economically. Patent 2,773,299 by Robert J. Mack.

PHOTOLITHOGRAPHIC PRINTING ART

Corrections and additions may be made directly on the negative plate by this invention without the use of photography. It is particularly suited to the production of maps and charts. Patent 2,772,942 by Mark A. Mattare.

LIGHT SENSITIVE MATERIAL FOR REPRODUCTION

A lithographic printing plate can be prepared by coating a sheet metal base with a light-sensitive layer consisting of imaged areas and alkali soluble non-imaged areas, said non-imaged areas being free from the imaged areas containing p, p'-bis-(1-methyl-5, X-dinitro-naphthalene-4-sulfonamide)-2, 2'-dimethoxy-diphenyl-sulfone. Patent 2,773,765 by Oskar Sus, Maximilian P. Schmidt, and Martin Glos, assigned to Azoplate Corporation.

LIGHT-SENSITIVE MATERIAL AND PROCESS FOR IMAGE PRODUCTION

A presensitized lithographic plate is composed of a flexible sheet-like base, such as aluminum, zinc and papers coated with a composition made up of mineral filler and adhesive. The base has a hydrophilic surface on which there is a thin uniform layer of a light sensitive material including an ortho-nitro formyl compound. Patent 2,773,766 by Oskar Sus and Karl Moller, assigned to Azoplate Corporation.

LIGHT SENSITIVE MATERIAL

The material is useful for preparing lithographic printing plates of the type described in patents 2,773,765 and 2,773,766. The plate is prepared by exposing a light sensitive layer sensitized by means of a derivative of acenaphthene to a light image under a master pattern and developing the exposed material by treating it with a dilute acid. Patent 2,773,767 by Martha Tomanek and Wilhelm Neugebauer, assigned to Azoplate Corporation.

TREATING SOLUTION FOR LITHOGRAPHIC PLATES

A liquid desensitizer solution for planographic printing plates is composed of oleic acid having dissolved therein from 0.1 to 5% of a water-insoluble soap selected from the group consisting of aluminum, zinc, calcium and magnesium salts of oleic, stearic and palmitic acids. Patent 2,773,779 by Frederic E. Brinnick and Charles H. Van Dusen, jr., assigned to Addressograph-Multigraph Corp.

FLEXIBLE PRINTING PLATE

A flexible printing plate for attachment to a curved magnetic printing bed is made up of a non-magnetic material with a continuous layer of magnetizable elements fastened to its rear face in such an arrangement that the plate retains its flexibility for being curved over a printing cylinder. Patent 2,774,302 by Reidar Stromme.

●

Feeding, Folding, Delivery

MACHINE AND METHOD OF FOLDING SHEETS

With this machine, two superposed sheets can be simultaneously folded at least three times with one of the folds at right angles to the first fold to produce a 32 page signature. The outside sheet has a number of short, spaced slits which allow the leaves to adjust themselves to the change effected by the right angle fold and prevent wrinkling of inner leaves. Patent 2,775,448 by Leonard Baker,

Walter Holms and Leo C. Williams, assigned to Miehle Printing Press & Mfg. Co.

SHEET STACKER

Flexible sheets are handled efficiently by the use of a perforated belt disposed over a platform on which the sheets are stacked, which belt is driven in seal making contact with an evacuated housing. The underside of the belt carries by air suction the exposed leading portions of overlapped edges of sheets. Patent 2,772,880 by Elmer E. Garrett, assigned to E. G. Staude Mfg. Co., Inc.

SINGLE CHAIN GRIPPER

Chain carried grippers for moving sheets of paper and the like have heretofore been troubled with unequal and excessive wear. This invention overcomes this by utilizing standard chains, pins and rollers and building the gripper into a part of a single chain. Pins are disposed halfway between the rollers, passing through a clearance between the pairs of teeth received in the chain. Patent 2,773,585 by Joseph R. Caulfield, assigned to Champlain Company, Inc.

PAPER FEEDING MECHANISM

For use with multi-color printing presses, this apparatus uses a large diameter feed roll in conjunction with a pressure roll. The pressure roll is so mounted that it may be adjusted about the feed roll to regulate the degree of arcuate contact of the web from a minimum of less than 90 deg. to more than 270 deg. Thus rate of web feed may be regulated according to its thickness. Patent 2,775,449 by Laszlo M. Stempel, assigned to John Waldron Corp.

SHEET FEEDING MECHANISMS

To insure that sheets are fed from a stack with uniform grip and pressure, this mechanism uses a cam-and-follower device for the top and bottom of a sheet metal plate carrier and a common actuator for simultaneously applying equal pressure to top and bottom of carrier. Patent 2,775,451 by Leonard W. Styles, assigned to Gestetner, Limited.

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Printing Presses:

PACK TURNOVER APPARATUS

This boxlike pile carrier may be used in conjunction with a printing press. It receives sheets in horizontal position, then rotates them by means of an electric motor, rotating the carrier about an axis at a rearwardly inclined position, retaining the sheets by gravity. No clamps are used, and a jogging action maintains sheet alignment. It is efficient, foolproof, easy to install and economical to manufacture. Patent 2,774,487 by Clifford P. Rounsefell and Leo C. Williams, assigned to Miehle Printing Press & Mfg. Co.

DEVICE FOR PRINTING IN REGISTER

Large size sheets of perfect marking may be printed by silk screen with the help of a single operator, using this machine. The squeegee arm, when operated, causes a delay before the screen carrying frame is lifted, then simultaneously operates both frame and elements. Accuracy of registering the various printings is achieved while ensuring their position during each printing operation. Patent 2,775,194 by Louis G. Dubuit.

DAMPENING LITHO PLATE and DAMPING ROLLER

This improvement relates to a seamless, knitted sleeve for damper roller such as disclosed in U. S. patent No. 2,149,606. It uses a velour fabric made by cutting off loops of the small threads during knitting. The napping of this cover assures uniformity of wetting, high absorption, and longer duration of life. Patent 2,775,195 by Herman H. Martin.

GRIPPER MECHANISM

For use on gripper assemblies in printing press or wherever sheets are transferred from one printing unit to the next, this device has several advantages. A toggle connection in the gripper operating mechanism is arranged to be in toggle on position when grippers are closed, thus preventing bouncing of the grippers in the closing operation. Gripper shaft

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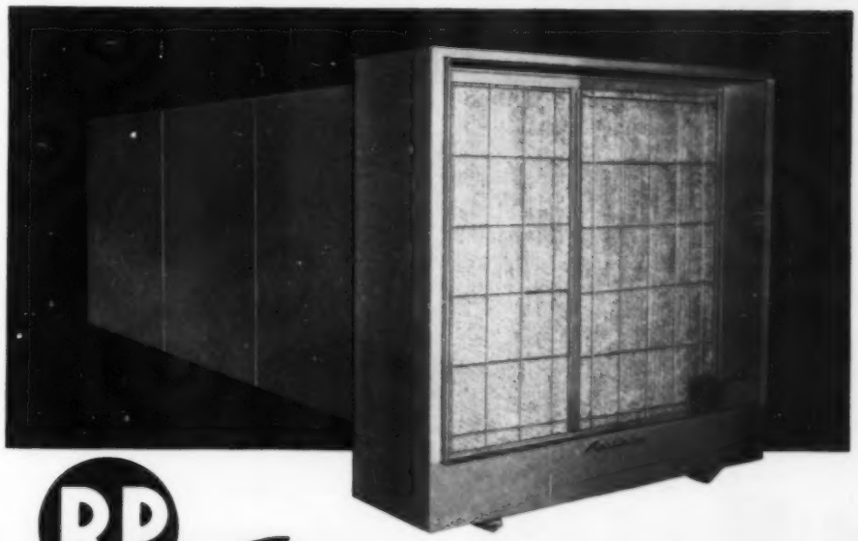

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Important Features—HIGH CAPACITY (unit sizes up to 10 gallons per hour); POSITIVE CONTROL (introduces humidity as needed—only when needed without lag or over-run); FLEXIBILITY (for gas, steam or hot water heat source); MINIMUM MAINTENANCE (the only liming occurs on inexpensive, replaceable evaporating elements); ISOTHERMAL OPERATION (has no temperature effect on humidified air); BACTERIA REMOVAL (the Aprilaire's unique method of humidification provides an important plus feature—up to 70% of all bacteria in air stream passing through unit is removed).

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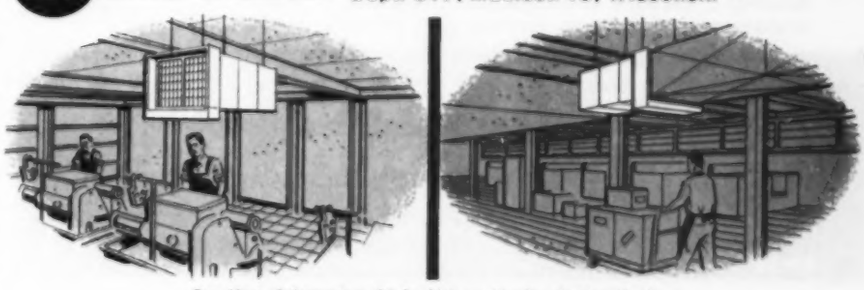

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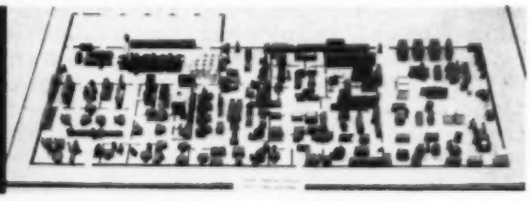

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torsion is reduced and much lighter spring construction is possible. Patent 2,775,197 by Robert K. Norton, assigned to Harris-Seybold Co.

PLATE CLAMP

The object of this plate clamp is to provide a ready and easily operated means for skewing the printing plate. It comprises a plate cylinder which receives and holds a planographic flexible plate, the ends of which are clamped to rigid moldings. Tension on the printing plate is caused by spring-pressed clamp for drawing the bars together. A spreading device operates pivoting and lengthwise adjustment from one end of the cylinder. Patent 2,775,198 by Thomas H. Johnson and Anthony J. Mueller, assigned to Harris-Seybold Co.

FLEXIBLE PRINTING PLATE LOCKING DEVICE

This lock secures flexible lithographic plates to the surface of a plate cylinder. The lock consists of two strips of rigid material separated by a layer of rubber, and it has adjustable features for drawing the strips together to cause rubber to protrude at the longitudinal margins to form a resilient filler which frictionally binds the plate. Patent 2,775,199 by Clarence L. Claff and Carl A. Moeller, assigned to M. B. Claff & Sons, Inc.

WEB ROLL REPLENISHER

In splicing a new roll of paper to a press, this replenisher effects a flying splice by motor advancing a new roll or bundle into contact with the web where it passes over a splice roll, forcing the latter to move a short distance against preloaded springs for effecting suitable contact pressure and speeding up the new bundle, together with means actuated by movement of the splice roll to stop the motor. Patent 2,775,409 by Anthony W. Pomper, assigned to John Waldron Corp.

SOCKET FOR INK CYLINDER

The socket is for mounting vibrated ink cylinders riding in contact with a pair of rubber rollers. The socket, after initial adjustment, is self-adjusting to accommodate itself to changes in the diameter of the rollers which it engages resulting from heat and absorption of ink. Patent 2,774,299 by Corson W. Chase, assigned to The Goss Printing Press Co.

SOCKET FOR INK ROLLER

This socket, similar to the construction of patent 2,774,299, enables force to be brought to bear resiliently against two ink cylinders, either equally or in predetermined ratio, independently of internal forces such as imposed by gravity or by the pressure of auxiliary rollers and cylinders. Patent 2,774,300 by Corson W. Chase, assigned to The Goss Printing Press Co.

INK ROLLER MOUNTING FOR PRINTING PRESSES

In a roller mounting system for a printing press, the pressure on any desired roller is applied or released by a simple pneumatic mechanism for each roller. There is a manifold for supplying gas under pressure to each pressure applicator and a mechanism for maintaining gas at a predetermined pressure. Patent 2,774,301 by Emory W. Worthington, assigned to R. Hoe & Co., Inc.

LOCKING DEVICE FOR LINE SLUGS

The locking device is adapted for gripping and holding Linotype or other line slugs in a printer's chase. The slugs are held in such a manner that they can be exchanged without any planing, make-ready or other operations and without removal of the chase from the press. Patent 2,774,303 by Clarence A. Kelley and Jerome S. Jervan.

THROWOFF MECHANISM FOR PRINTING PRESSES

Movement of inner and outer eccentrics together produces throwoff of the blanket cylinder from the plate cylinder. Then movement of the inner eccentrics alone produces throwoff from the impression cylinder. This arrangement prevents the wedging action which occurs where the outer eccentrics are forced between two stationary surfaces in a manner tending to move them apart. Patent 2,773,445

by James R. Wood, assigned to Harris-Seybold Co.

HEATABLE ENGRAVING STYLUS ASSEMBLY

Heat necessary for engraving is generated directly in the stylus tip. This gives a more constant heat while operating at a lower average temperature. This stylus is especially adapted for use in the engraver described in U. S. patent No. 2,575,546. Patent 2,773,163 by John A. Boyajean, assigned to Fairchild Camera and Instrument Corp.

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Binding:

BOOK BACKBONE STRUCTURE WITH CONCEALED RIVET

The manufacture of paperboard book and binder casing to overcome structural weakness of conventionally rounded backbones made of binder's board is improved by making the backbone of two pre-formed backbone strips each of half the weight of the companion cover boards. The strips are joined by a hard setting glue applied after the backbone pieces have been pre-rounded. Patent 2,772,427 by Edward C. Rankin, assigned to Brock & Rankin, Inc.

•

Miscellaneous:

METHOD OF LOCATING PICTORIAL CUTS ON NEWSPAPER PAGES

A locator and method have been developed to record the format of one newspaper page with respect to the placement of photographic or halftone cuts so that similar cuts planned for the page at the opposite side of the newspaper sheet can be matched in back to back relation. It eliminates show through, strike-through, etc. Patent 2,772,631 by Arnold L. Imshaug.

CLEANING RESIDUAL POWDER IMAGE FROM ELECTRO-PHOTOGRAPHIC PLATE

A free flowing cleaner having correct triboelectric relation to the toner particles is provided in this invention. This powder is a mixture of barium sulfate and a water insoluble metaphosphate salt. It is free flowing, non-toxic, has a large surface absorption, and may be manufactured at low cost. Patent 2,772,991 by Michael A. Insalaco, assigned to The Haloid Company.

PATENT SEARCHES

For Patent Research in the U.S. Patent Office, or a prompt estimate on any type of search, write

INVENTION, INC.
Munsey Bldg. Washington, D.C.

Lake Erie's New Ownership

Lake Erie Engineering Corp., Buffalo, N. Y. has been acquired by the Bell Aircraft Corp. according to announcement by Presidents Robert E. Dillon of Lake Erie and Leston P. Faneuf of Bell. As a wholly-owned subsidiary of Bell, Lake Erie will be operated independently; Dillon continues as president and chief executive officer. There will be no changes in management, personnel, or products except that manufacturing emphasis will be placed on broadening and improving the present product line.

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Graphic Arts Meetings

(With Organization Name and Correspondence Officer)

American Photoengravers Assoc. — 1957 Conv., Bellevue-Stratford Hotel, Philadelphia, Oct. 14-16. Exec. Secy. Frank J. Schreiber, 166 W. Van Buren St., Rm. 430-A, Chicago 4, Ill.

ANPA Mechanical Conf.—1957 Conf., Morrison Hotel, Chicago, June 10-12. Mgr. Richard E. Lewis, ANPA Mechanical Dept., 370 Lexington Ave., New York 17, N. Y.

Book Manufacturers' Institute—1957 Conv., Mount Washington Hotel, Bretton Woods, N. H., Sept. 23-25. Secy. Miss A. G. Watson, 25 W. 43rd St., New York 36, N. Y.

Educational Graphic Arts Exposition—Coliseum, New York, N. Y., Sept. 6-12, 1959. A. E. Giegengack, 5600 Massachusetts Ave., N.W., Washington 16, D. C.

Fifth District Craftsmen's Conf. — 1957 Conf., Brown Hotel, Louisville, Ky., May 17-18. Secy.-Treas. George W. Thompson, Toledo Colortype Co., 1711 Jefferson Ave., Toledo, O.

Graphic Arts Trade Assoc. Executives—Secy.-Treas. Charles Hackett, Memphis Printing Industries, 330 Falls Bldg., Memphis, Tenn.

Gravure Technical Assoc.—1957 Conf., Drake Hotel, Chicago, March 6-8. Exec. Secy. Edward S. St. John, Room 4800, 30 Rockefeller Plaza, New York 20, N. Y.

Great Lakes Mechanical Conf.—1958 Conf., Hotel Claypool, Indianapolis, Ind., Jan. 12-14. Secy.-Treas. Don Clark, Stereotype Supt., Grand Rapids (Mich.) *Press*.

Illinois Newspaper Mechanical Conf. —1957 Conf., Hotel Faust, Rockford, Ill., Sept. 28-29. Secy.-Treas. Arthur Kramer, Joliet (Ill.) *Herald-News*.

Intl. Assoc. Electrotypers & Stereotypers—1958 Conf., American Hotel, Bal Harbour, Fla., Oct. 21-24. Exec. Secy. Floyd C. Larson, 701 Leader Bldg., Cleveland 14.

Intl. Assoc. of Printing House Craftsmen—1957 Conv., Statler Hotel, Buffalo, N. Y., Aug. 4-7. Exec. Secy. Pearl E. Oldt, 411 Oak St., Cincinnati 19, O.

Intl. Graphic Arts Education Assoc. —1957 Conv., Rochester Institute of Technology, Rochester, N. Y., July 28-Aug. 2. Exec. Secy. Samuel M. Burt, 5728 Connecticut Ave., N. W., Washington 15, D. C.

Intl. Printers Supply Salesmen's Guild—1957 Conv., Statler Hotel, Buffalo, N. Y., Aug. 4-5. Secy. Francis J. Tominey, *New England Printer & Lithographer*, 470 Atlantic Ave., Boston 10, Mass.

Intl. Typographic Composition Assoc. — 1957 Conv., Hotel President, Kansas City, Mo., Sept. 18-21. Exec. Secy. W. E. Switzer, 1015 Chestnut St., Philadelphia 7, Pa.

Iowa Daily Newspaper Mechanical Conf.—1957 Conf., Hotel Hanford, Mason City, Ia., May 4-6. Secy.-Treas. Paul F. Kamler, Mechanical Supt., Clinton (Ia.) *Herald*.

Kansas-Missouri Newspaper Mechanical Conf.—1957 Conf., Town House Hotel, Kansas City, Kans., Sept. 7-8. Kansas Secy.-Treas. Larry Miller, Kansas Press Assoc., 701 Jackson St., Topeka, Kans. Missouri Secy.-Treas. William A. Bray, Missouri Press Assoc., 220 Walter Williams Hall, Columbia, Mo.

Lithographers National Assoc., Inc.— 1957 Conf., The Greenbrier, White Sulphur Springs, W. Va., Apr. 1-3. Exec. Dir. W. Floyd Maxwell, 381 Fourth Ave., New York 16, N. Y.

Mid-Atlantic Newspaper Mechanical Conf.—1957 Conf., Sheraton Hotel, Philadelphia, Pa., March 21-23. PNPA General Mgr. Richard Dew, 2717 N. Front St., Harrisburg, Pa.

National Assoc. of Litho Clubs—1957 Conv., Palmer House Hotel, Chicago, May 2-4. Exec. Secy. Eugene Hanson, 4440 Bessie St., St. Louis 15, Mo.

National Assoc. of Photo-Lithographers—1957 Conv., Chase-Park Plaza Hotel, St. Louis, Mo., Sept. 11-14. Exec. Dir. Walter E. Soderstrom, 317 W. 45th St., New York 36, N. Y.

National Paper Trade Assoc.—1957 Meeting, Waldorf-Astoria Hotel, New York, N. Y., March 25-27. Secy. J. H. Londergan, 220 E. 42nd St., New York.

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National Printing Equipment Assoc., Inc.—1957 Conf., Hotel Morrison, Chicago, Oct. 15-16. Secy. James E. Bennet, 140 Nassau St., New York 38, N. Y.

National Safety Council Printing and Publishing Section—Staff Rep. Arthur Siedlecki, National Saftey Council, 425 N. Michigan Ave., Chicago 11.

New England Composing Room Executives Assoc.—1957 Conf., Keene, N. H. Secy. Lewis R. Greene, Westerly (R.I.) *Sun.*

New England Newspaper Mechancal Conf.—1957 Conv., Hotel Statler, Boston, Mass., Oct. 19-20. Secy.-Treas. Walter C. Crighton, Comp. Room Supt., New London (Conn.) *Day.*

New York State Capital District Mechanical Conf.—Dir. Floyd Laurenty, Albany (N. Y.) *Times-Union.*

Northwest Mechanical Conf.—Secy.-Treas. Ralph N. Carson, Linecasting Instructor, Dunwoody Industrial Institute, 818 Wayzata Blvd., Minneapolis, Minn.

Pacific Newspaper Mechanical Conf., —1957 Conf., Multnomah Hotel, Portland, Ore., Aug. 23-25. Secy. Donald Newhouse, Prod. Mgr., The Portland (Ore.) *Oregonian.*

Packaging Institute Assoc. — 1957 Forum, Hotel Statler, New York, N. Y., Oct. 28-30. Exec. Dir. Chas. A. Feld, 342 Madison Ave., New York 17, N. Y.

Printing Industry of America—1957 Annual Conv., Morrison Hotel, Chicago, Ill., Oct. 14-18. Gen. Mgr. Bernard Taymans, 5728 Connecticut Ave., N.W., Washington 15, D. C.

Research and Engineering Council of the Graphic Arts Industry Inc. — 1957 Meeting, Ben Franklin Hotel, Philadelphia, May 15-17. Managing Dir. Robert E. Rossell, 5728 Connecticut Ave., N.W., Washington 15.

Screen Process Printing Assoc., Intl. —1957 Conf., Sheraton-Cadillac Hotel, Detroit Mich., Oct. 26-28. Exec. Secy. Robert H. Blundred, 549 W. Randolph St., Chicago 6.

SNPA (Eastern Div.) Mechanical Conf.—1957 Conf., Dinkler Tutwiler Hotel, Birmingham, Ala., Aug. 18-20. Secy. John A. Hogg, Southern Newspaper Publishers Assoc., P.O. Box 1569, Chattanooga 1, Tenn.

SNPA (Western Div.) Mechanical Conf.—1957 Conf., Hotel Galvez, Galveston, Tex., March 10-12. Secy. Walter Johnson, jr., P.O. Box 1569, Chattanooga 1, Tenn.

Southern Graphic Arts Assoc.—1957 Conv., Battle House, Mobile, Ala., April 4-6. Secy. Charles E. Kennedy, 1514 South St., Nashville 2, Tenn.

Technical Assoc. of the Graphic Arts —1957 Conf., Ben Franklin Hotel, Philadelphia, May 13-15. Secy.-Treas. Phillip E. Tobias, 140 N. 6th St., Philadelphia 6, Pa.

Ellington Now with Neely—Al Q. Ellington resigned recently as Southeastern and Southwestern sales representative for The J. Thomas McHugh Co., Inc. Ellington is now vice president and sales manager of Neely Roller Co., Birmingham, Ala.

U.S. $ Goes Dry

Dry instead of wet money will be printed by the U.S. government on eight new rotary, sheet fed De La Rue presses ordered from R. Hoe & Co., Inc. The first units under the $1½ million contract are scheduled for delivery in late May to the Treasury Department's Bureau of Engraving and Printing in Washington, D. C. Joseph L. Auer, Hoe president, said: "It's the first time that currency meeting the high printing standards of the dollar bill can be produced by the dry intaglio process. The wet process used previously prints only 18 bills on a sheet, while the dry process prints 32 and runs two and a half times faster.

"The Treasury Department prints 9,000,000 dollar bills a day. Each bill must be perfect. In the present method, wet banknote paper is pressed against the engraved plates. While this produces a fine printing job, the paper tends to stretch and some bills are rejected because they don't meet the Bureau's high standards."

The new presses were designed and will be built by Thomas De La Rue & Co., Ltd., of England. Under a 15 yr. agreement, Hoe will be responsible for maintenance, repair, spare parts and any future design modifications.

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Add Savings and Profits with these
MORRISON Modern Time-Savers!
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Morrison Model 3-A
A high speed, highly versatile saw trimmer designed for great strength and durability. Features include: Behind-the-Gauge Workholder, 73-Pica Gauge, 135-Pica Swing-Out Extension Gauge, Miter and Line-Up Gauge, Right and Left Hand Miter Vise, Saw Grinding Attachment with Universal Saw Blade, Emery Wheels, Trimmer Grinder, Waste Receptacle, Motor.
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Designed for medium-sized plant, with many features of Model 3-A. Capable of high speed production, extreme accuracy and versatility to match the needs of most composing rooms.
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Simplify plate and type corrections without mortising
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Valuable time-savers in any composing room. Cut Linotype, Intertype, Ludlow or AFL Slugs, or single type, to any height required, from 0.065" to 0.105" or 0.152". Handle slugs ranging from 1 to 72 points and up to 50 picas in length. Simple and safe to operate.
Morrison Router and Type High Planer
with Exclusive Micrometer Height Gauge
Double-duty machine, providing accuracy and speed in routing, plate corrections, type-high planing for composing rooms, engraving plants, electrotype foundries.
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Important for engraving plants, the Morrison Plate Beveler cuts perfect burr-free shoulders on any square engraving in seconds! Safe, works from edge of plate, not top; no possible contact between cutters and fingers, no flying chips. Soft leather protects plate face.
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News ITEMS

Education Council Appointment — Harry A. Porter, retired senior vice president of Harris-Seybold Co., has been named executive vice president of the Education Council of the Graphic Arts Industry. He will be located at the Council's Washington, D.C., headquarters but will maintain his Cleveland residence. Porter said he plans to travel extensively throughout the country in promoting the interests of the Education Council.

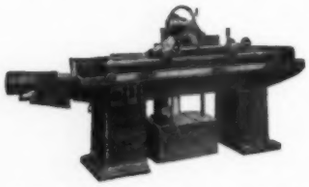
Auer Appointed Vice President— Appointment of Frederick G. Auer as a vice president was announced by Champlain Company, Inc. Auer has been with Champlain since 1934, and has served as Chief Engineer since 1948.

AUER

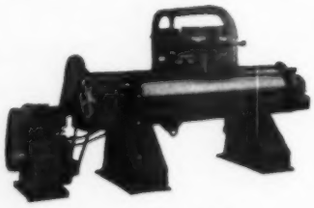
SPECIAL GRINDING, POLISHING AND DIAMOND LATHE EQUIPMENT BUILT BY

Schwede

This lathe serves to turn cylinders along their full width so that they are exactly cylindrical; this is of fundamental importance for an even impression and exact register in multi-color printing. Cylinders with a new copper deposit are first turned with hardened steel, then they receive precision turning with a diamond. The diamond produces such smooth surfaces that the cylinder only needs slight polishing to be ready for etching. The depth of the cutting (4 ten thousandth to 6 thousandth of an inch) can be set exactly by means of a measuring instrument (micrometer) on the diamond holder. The cylinder diameter can be determined to 4 ten thousandth of an inch. Working time for a cylinder up to 79" cylinder length: about 1½ to 2 hours.



Doctor Blade Grinding Machine



Copper Cylinder Grinding and Polishing Machine

HENRY P. KORN

5 Beekman Street Phone: REctor 2-5808 New York 38, New York

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Means Now in New PIA Post—C. C. Means, who has been field representative for Printing Industry of America, will become director of member and public relations with headquarters in Washington, D.C. Under Means' new assignment he will spend a major portion of his time working with managers of the 63 affiliated associations of PIA to develop programs which will bring about utilization of PIA's services. Means was formerly manager of Graphic Arts Assoc. of Michigan.

Cline General Manager — Warren P. Scott, president of Cline Electric Mfg. Co., announced appointment of Find Sandgren, former assistant general manager, as general manager of the company's Graphic Arts Products Div. Other appointments in the division include Leroy P. Palmer, who was made works manager; Ronald F. Spiller, production manager, and William F. Butor, who becomes purchasing agent. In the Paasche Airbrush Co. Div. Scott announced appointment of Paul A. Benke as general manager. Concurrently, Frank R. Barth has been named vice president and treasurer of the corporation.

SANDGREN

Standard Register Co., Dayton, O., has named W. Earl Stewart and Roy H. Lindberg as assistants to the vice president of engineering and research, according to John T. Davidson, vice president of the firm.

BROWNE

Linotype Production Engineer — Robert E. Browne has been appointed production engineer for Mergenthaler Linotype Co. in the Company's Cleveland Agency. His territory consists of Western New York and Northwestern Pennsylvania. He succeeds W. A. Geitlinger who recently retired after 42 yrs. of service.

Miehle San Francisco Manager— Carlton Mellick, vice president of sales, Miehle Printing Press and Mfg. Co., has announced appointment of Bert S. Steiner as manager of the Miehle sales office in San Francisco. Steiner was transferred from the New York, N. Y. office to replace Harold Iverson who is retiring. Iverson will continue with Miehle in an advisory and consultant capacity. The combined Miehle-Dexter sales force in San Francisco will be aided by Glen E. Backman, Dexter Sales Specialist.

Lawson Sales Appointment—Alexander F. Bekassy has been assigned to E. P. Lawson Co.'s eastern sales staff, according to Lester M. Reiss, vice president and eastern sales manager. Bekassy will be headquartered at

Harris-Intertype Merger in Process

Merger of Harris-Seybold Co., Cleveland, and Intertype Corporation, New York, N. Y., was approved Feb. 25 by directors of both companies subject to approval by shareholders.

According to a joint announcement by Geo. S. Dively, chairman and president of Harris-Seybold, and Harry G. Willnus, president of Intertype, the merger will be on the basis of five shares of H-S stock for six shares of Intertype stock.

A special meeting of Intertype shareholders will be scheduled for early May, and of Harris-Seybold shareholders shortly after to vote on the merger.

The combined organization will be known as Harris-Intertype Corporation. Harris-Seybold primarily is a producer of printing presses, while Intertype specializes in typesetting equipment.

Combined sales approximate $60 million annually, net earnings around $5 million, and total assets about $55 million. Employees total 4800.

Willnus will continue as president of Intertype, with Dively becoming chairman and president of Harris-Intertype Corporation. Intertype will become an autonomous division of Harris-Intertype.

Philadelphia in the Bourse Bldg. and will cover Virginia, Washington, D.C., Maryland, Delaware and part of Pennsylvania.

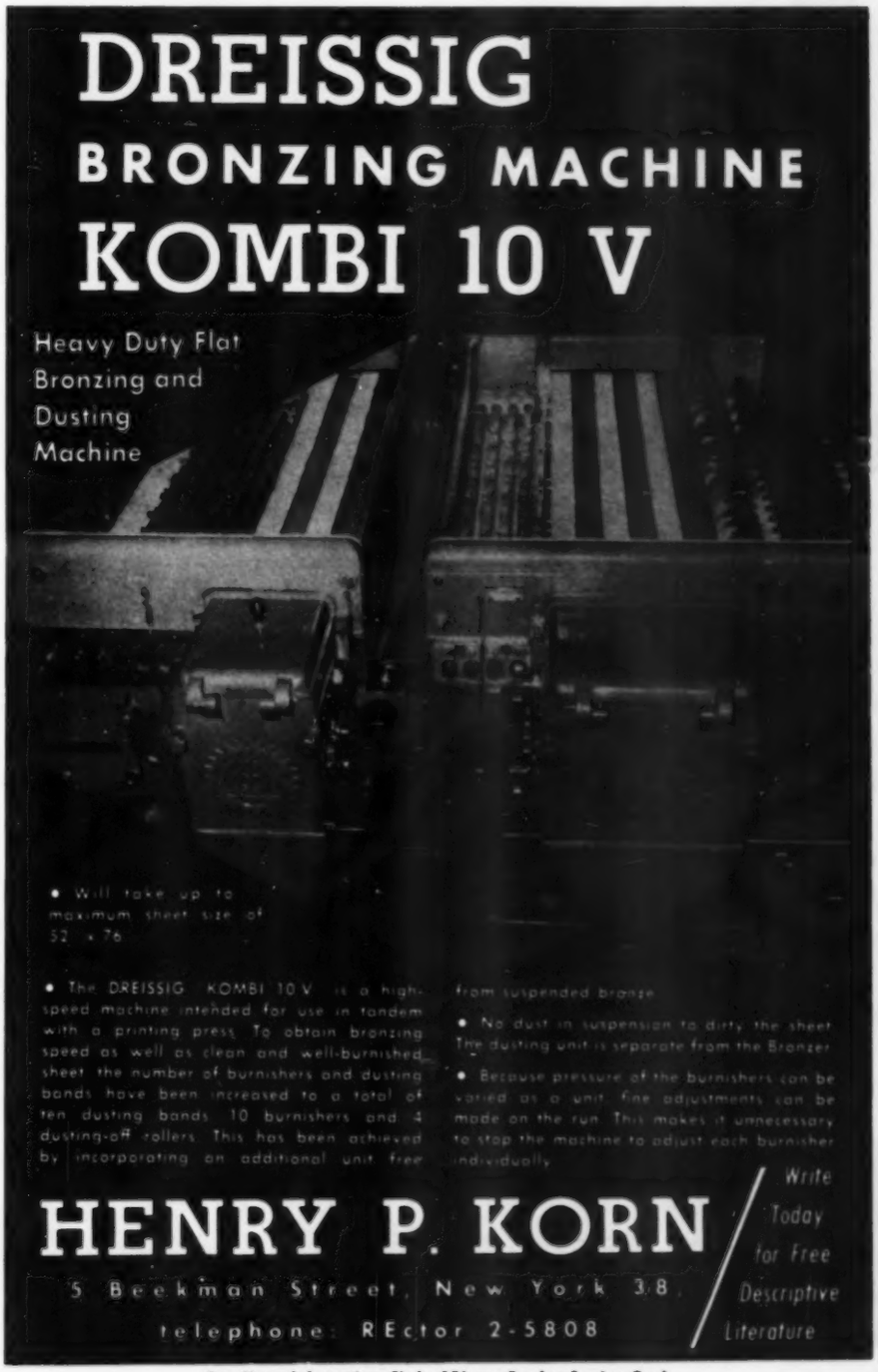
THOMAN

Huber Appointment—Robert E. Thoman has been appointed a sales representative of J. M. Huber Corp.'s Ink Div. in the territory covering Ohio, West Virginia, Pennsylvania and Western New York, according to an announcement by Louis A. Lara, general sales manager of the division. Thoman was formerly with the firm's St. Louis office.

Two Chicago Groups Merge—An expansion of the Graphic Arts Assoc. of Illinois became effective Feb. 1, when the Chicago Lithographers Assoc. and the GAAI merged activities and memberships. All members of CLA became members of GAAI and of the Printing Industry

WEBB LAWRENCE WILLIAMS SWIFT

Bingham Sales Promotions—Sam'l Bingham's Son Mfg. Co. has announced the following appointments. John J. Webb has been named to the newly-created post of district manager and will be headquartered in Atlanta, Ga. Roy Lawrence has been appointed manager of the company's Minneapolis branch. William H. Williams has been appointed manager of the Kansas City branch, succeeding Lawrence. Corwin C. Swift has been promoted to manager of the Indianapolis branch.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BRONZING MACHINE
KOMBI 10 V
Heavy Duty Flat Bronzing and Dusting Machine
• Will take up to maximum sheet size of 52 × 76
• The DREISSIG KOMBI 10 V is a high-speed machine intended for use in tandem with a printing press. To obtain bronzing speed as well as clean and well-burnished sheet the number of burnishers and dusting bands have been increased to a total of ten dusting bands 10 burnishers and 4 dusting-off rollers. This has been achieved by incorporating an additional unit free from suspended bronze
• No dust in suspension to dirty the sheet. The dusting unit is separate from the Bronzer
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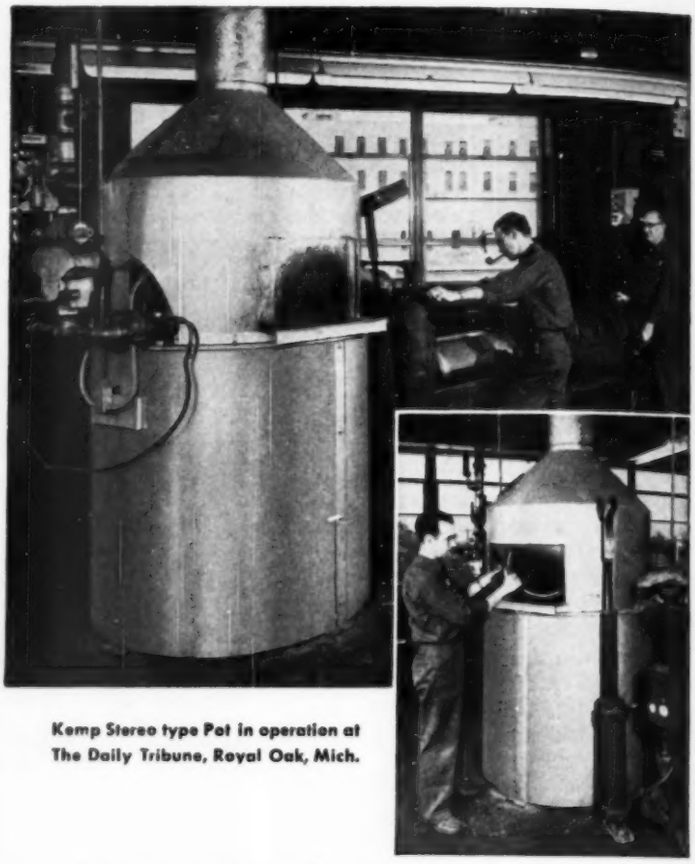
The Daily Tribune picks KEMP STEREO POT for dependable operation



Kemp Stereo type Pot in operation at The Daily Tribune, Royal Oak, Mich.

No pot breakage, less dross formation with Kemp equipment

Its stereo pot is a vital part of the Royal Oak, Michigan, Daily Tribune's operation. To minimize the danger of a costly breakdown, the Tribune chose a Kemp Stereo Pot.

Kemp has justified its purchase at the Tribune. Danger of pot breakage has practically been eliminated; dross formation has been reduced. And in addition, Kemp immersion heating units eliminate inefficient external burners—assure high melting rates, rapid temperature recovery after adding cold material, and save up to 40% on fuel. No wonder the Tribune, like all other Kemp users, is pleased with Kemp performance!

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of America, under the regular GAAI dues schedule. The lithographers' group, however, retains its own identity as the collective bargaining organization for lithographers, and will have its own officers and board of directors. Arch Macready was added to the GAAI staff, and will be the new executive director of CLA. Macready's primary duties will be labor relations and collective bargaining for the lithographers.

HEYDENREICH

Heads New Machinery Firm — Alfred Heydenreich has been named vice president and general manager of the newly formed Tirfing Printing Machinery, Inc., 400 Delancy St., Newark, N. J. Tirfing will distribute equipment manufactured by Grafiska Maskin Aktiebolaget of Sweden. Included in the firm's line will be the 31 in. by 41 in. and 35 in. by 45 in. Viking letterpresses and the Viking cutter and creaser. Heydenreich formerly was associated with American Type Founders.

Extensive Speaking Tour — Editor Edmund C. Arnold, *Linotype News*, who is Mergenthaler Linotype Co.'s staff specialist on newspaper designing, has been engaged in an extensive itinerary of appearances before newspaper groups. In January, he spoke before a number of southwestern groups. He will conduct the annual one day typographic workshop at Southern Illinois University in Carbondale on Mar. 16. He is slated to address the Type Directors Club of New York, N. Y. at Hotel Shelton on Apr. 2. As part of the club's "Typography 1957" program, Arnold will speak on *What's New in Newspaper Typography*. On Apr. 15 he will conduct a typographic workshop at the University of Missouri in Columbia for the Annual Editorial Conference of Cooperative Newspaper Editors. Arnold is author of the new book *Functional Newspaper Design*.

RIPPE

Hamilton Creates Merchandising Dept. — Hamilton Manufacturing Co. has created a new merchandising staff under the direction of C. H. Rippe, formerly sales manager of the company's appliance division. The group will plan and execute merchandising and sales promotional activities for the company's products. D. C. McDermand and R. M. Giblin, now sales promotion managers, have also been assigned to the merchandising department.

ATF Announcement—J. Hugh Bolton, president and director of Whitin Machine Works, has been elected a director of American Type Founders Co., Inc., according to an announcement by Samuel Flug, chairman of the board of ATF. William W. Fisher, ATF's president, reported that ATF had entered into an agreement with Whitin Machine Works to manufacture a number of its Chief offset presses. Whitin is already producing the Chief 15 offset press for ATF and is investing more than $4½ million in new buildings, machine tools and plant facilities. Other phases of ATF's expansion program inaugurated a year ago are substantially ahead of schedule, according to Fisher.

New York & Penn Moves—Executive and sales offices of New York & Pennsylvania Co. will be moved into new and larger headquarters sometime next spring, announced Peter S. Paine, president. Building is located at 425 Park Ave., New York, N. Y. and the company will take over the entire 17th floor of the 31 story air conditioned structure.

Miller Branch Managers — Miller Printing Machinery Co. has announced

BRADLEY JONES

appointments of A. E. Bradley to New York branch manager and Harry R. Jones to Chicago branch manager.

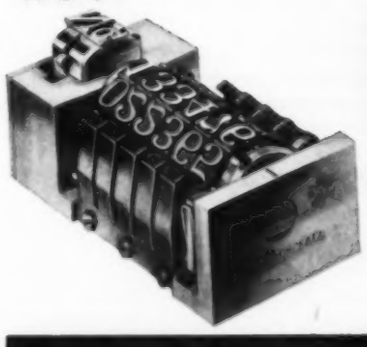
BIG numbers

sell . . . tags . . . tickets . . . labels

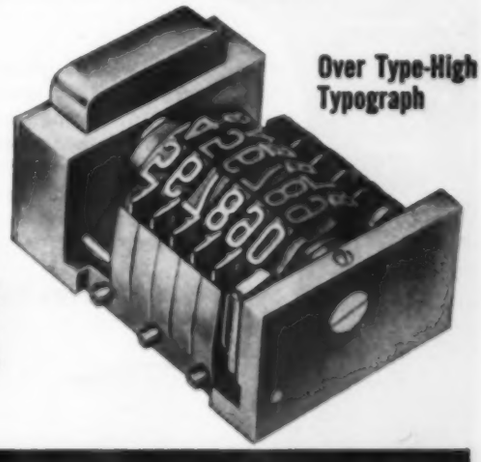
Print clear, sharp numbers in big sizes on tickets, labels, tags, baggage checks, etc. Large-Figure Typograph is type high, has 7/32" Roman or Gothic figures. Over Type-High Typograph is available with ¼" to 1½" Roman or Gothic figures, metal or rubber. These sturdy machines have hardened steel wearing parts . . . precision ratchets and pawls for accurate numbering at high speed.

Write for Force Rotary Heads and Typographs booklet.

Large-Figure Typograph



Over Type-High Typograph



WM. A. FORCE & CO., Incorporated

The FORCE of Numbers

216 Nichols Ave.
Brooklyn 8, N. Y.

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Bradley was formerly sales representative for Miller in the midwest, while Jones represented the company in the south Chicago area which included part of Indiana, Michigan and Illinois.

Kodak Joins Gravure Research—Eastman Kodak Co. has been elected an associate member of Gravure Research, Inc. Improved gravure color reproduction and better performance for rotogravure presses are now being studied by the non-profit research group in its laboratories at 282 Seventh Ave., New York, N. Y.

New BBD Salesman—William Gregones has been appointed to Bensing Bros. and Deeney's midwestern sales-service staff with headquarters in Chicago at 2358 N. Seeley Ave.

Ziminsky Elected Hoe Director—Election of Victor D. Ziminsky as a director of R. Hoe & Co., Inc. was announced by Joseph L. Auer, president and chairman of the board. Ziminsky, heads his own business consulting firm.

ZIMINSKY

Gay-Lee Co. Expands—Gay-Lee Co. has completed an addition which increases its manufacturing facilities by 25%, according to an announcement by Earl Goehle, president. The additional space was necessary to accommodate new equipment recently installed.

Lanston Northeastern Appointment—Lanston Monotype Co. division of Lanston Industries, Inc., recently announced appointment of Rocco E. Giorgio as Northeastern District Manager, coincident with the retirement of William J. Howe. Giorgio joined the Lanston sales-service organization in 1926. Howe had been with Lanston since 1920.

GIORGIO

Plover Bond Letterhead Competition—A gala week end at a Northern Wisconsin playground resort with all expenses paid will be the prize won by 12 commercial printers and 12 distributor salesmen whose entries are judged winners in Whiting-Plover Paper Co.'s second annual national letterhead competition. The contest period this year is extended to six months' duration—Jan. 1 through June 30, 1957, said Thomas Leech, Whiting-Plover president. All printers within territorial limits of the U. S. are eligible. To enter the contest, any printer must submit three copies of a letterhead printed on Plover Bond. Printing may be done by any reproduction method. Number of entries is unlimited, but letterheads must have been run from the finish of last year's competition. Reproduction excellence (50%) and design quality (50%) will be yardsticks in selection of winning letterheads. Winners will begin their four-day holiday week end in Stevens Point, home of Whiting-Plover, Sept. 4. They will see the firm's expanded mill facilities and be feted at luncheon and dinner before journeying on to Northernaire, a luxury resort at Three Lakes, Wis., for two days.

Entries for the 1957 contest must be mailed to: Plover Bond Letterhead Competition, Whiting-Plover Paper Co., Stevens Point, Wis. One letterhead must contain name and address of printer, printing company official and the name of the paper salesman and his company.

EWELL

Herman F. Ewell recently retired as manager of Ideal Roller & Mfg. Co.'s Milwaukee office. Ewell spent most of his 25 yrs. with Ideal in Minnesota and Wisconsin territory. Replacing him as manager of the Milwaukee Div., is Albert W. Bergmann who will be aided by Merle G. Owen of the Chicago territory, and Donald G. Weiner.

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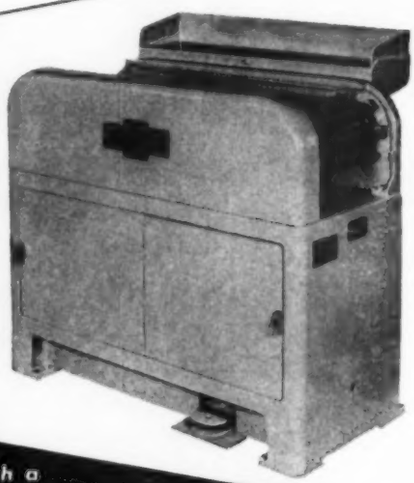

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There's no sacrifice of quality when you rush proofs on a WESEL EPP-4 proof press. Its smooth performance results from the same careful engineering that provides trouble-free operation with only a minimum of maintenance. The new EPP-4 features heavier construction, quieter operation and an improved platen inking system. Equipped with mechanical safety guards and automatic stopping.

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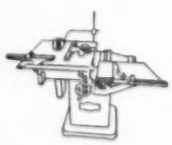

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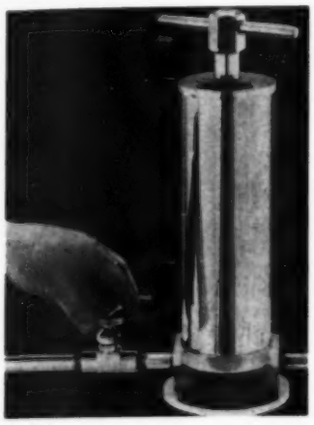
Equipment and Supplies

(Continued from Page 30)

formation, please circle No. 259 on the Reply Postcard.

Water Filtration Unit

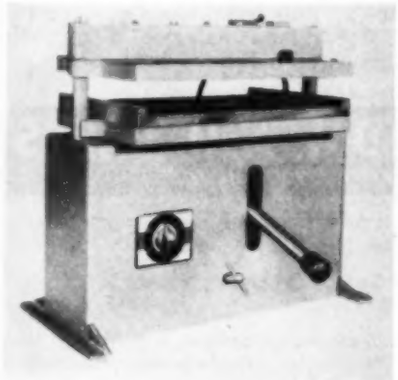
The Heico MIK Filtration Unit has been developed for the lithographic industry for removal of minute particles from water. Capacities of the Heico MIK Permanent Cartridge,



manufactured by Heico, Incorporated, range from 3 gal. to 10 gal. per min. Units are said to remove physical impurities larger than the rated densities of the cartridges. Cartridges are available in the following densities: 25, 10, 1 and 0.1 microns. The units may also be used for filtration of electronic wash waters, photography, and analytical laboratories. For further information, please circle No. 267 on the Reply Postcard.

Hydraulic Plate Press

Craftsmen Machinery Co. recently announced the MoldMaster Hydraulic Plate Press for making rubber plates, stamps and plastic laminates. The mechanically and electrically operated unit is for either 110 v. or 220 v., 60 cy., a.c. operation. Upper



and lower platens are 10 in. by 15 in., and the inside diameter of the steel chase is 9 in. by 14 in. A thermostatic unit is used to control heat from 175 deg. to 425 deg.; molding pressure is hydraulically applied. A 30 min. timer is used to automatically regulate line current. Bench space is 15 in. by 20 in. and the unit is 17 in. high. For further information, please circle No. 270 on the Reply Postcard.

Measuring Magnifier

The Edmund Scientific Co.'s measuring magnifier may be used for on-the-spot checks for linear dimensions, diameters, radii and angles. Linear dimensions are given both in inches and millimeters. Measurements are made without time consuming adjustments. Reticle can be removed. Then the instrument becomes a high-power magnifier. This instrument gives 6 power magnification. Mounted in transparent plastic cell. Leather container case. For further information, please circle No. 250 on the Reply Postcard.

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MORE PRODUCTION
with less fatigue!

The NEW RAR-1
WESEL ROUTER

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LTF's COLOR CHART

(*Editor's Note*: This article was abstracted from a paper prepared by Jack W. White of the Lithographic Technical Foundation by way of announcement to the Graphic Arts industry that the LTF Color Chart will be ready for distribution in March. The Chart is based on the research of Frank M. Preucil, Bruce Tory and Edward Brody. Further information is available from Lithographic Technical Foundation, Inc., 131 East 39th St., New York 16, N.Y.)

A simple color chart has been needed that is made with printing inks and that shows screened tints. Such a chart can aid craftsmen in estimating what color values will be produced on the press sheet by different halftone values on film or on the press plates.

A good color chart must be compact and easy to make as well as simple. It should have enough color combinations and values to minimize guessing in comparing the copy with the chart. At the same time, it should not have so many values that it takes too long to locate a given color. The colors shown on the chart should be organized so that the various hues are grouped. Finally, all this information should be on one sheet.

The LTF Color Chart meets all of the important requirements for a good color chart, as well as providing a means for standardizing color printing. It shows 1760 different color combinations made with two, three, and four colors. The different hues are grouped so that it is easy to find a color patch to match the copy. It is compact and can be run on one sheet. Much time and expense are saved in being able to get standardized platemaking negatives or positives. The most important feature of the LTF Color Chart is that *it has to be printed in the lithographic plant that will use it.*

A color chart has meaning only when it is produced under conditions that are known to the individual lithographer and which are under his control. Charts printed in one plant and sold for use in another plant can be misleading. The reason for this is simply that you can duplicate the colors shown on a chart only when you can also duplicate the conditions under which the chart was printed.

The conditions in any one plant are also changeable. For this reason, it is wise to reprint the color chart periodically. By making density measurements of the same known areas on the different runs of the chart, you can maintain a continuous check on the plant's operation.

Since the chart can be run on one sheet, it is practical to run it with most of the different inks and papers that you use in your plant. If a new set of inks or different paper is used, or anyone of a number of changes is introduced that affect color, the chart can be easily re-run.

The chart is designed primarily for a 22 in. by 29 in. sheet. However, all the important information can be run on a 17½ in. by 22½ in. sheet for those plants not having larger presses.

Although the major use of the chart will be by lithographers doing four color process work, its usefulness is by no means confined to this type of work. Basically, the LTF Color Chart provides for an orderly arrangement of combinations of any two, three, and four colors. For example, printers doing two-color work can see the full gamut of two-color combinations in a single block in the upper left corner of the sheet. Those doing three-color work can likewise use the six three-color blocks across the top row of the sheet.

Charts can be prepared using other combinations of process ink colors. Label printers, for example, would probably print their charts with dark blue instead of black as the fourth color. In fact, charts can be prepared that will combine any four colors of ink, process or non-process, on a given paper. Such charts can be of great help in fake color work or when pre-separated art is used as in the production of greeting cards.

BOOKS

Printers' Arithmetic

The problems associated with casting off (estimating) copy to be set into type of a given point size and setwidth are discussed in *Printers' Arithmetic*. We want to inform American printers, however, that the book contains English terminology. (The book was printed in England.) F. C. Avis is the author. But no one should have difficulty in understanding the meaning of such terms as mutton quad, run-on matter, quadrat, fat copy, and the like. A glossary containing the terms with definitions as understood in America is contained in the book.

The feature of the book consists of simpler arithmetical examples as to how to arrive at copy estimating, character count, good copy and bad copy. The handling of area problems such as triangular, circular and unusual shapes, is fully explained with simple arithmetical examples.

The author deals exhaustively with type calculations, stating methods and showing worked examples for over 30 kinds of problems, including number of pages copy will fill, solid or leaded; weight of type or lead required for a job, produced with founder's type or by mechanical composition, mixed sizes in one job, type page measurements for a book, etc.

Printers' Arithmetic—By F. C. Avis. Cloth bound, gold stamped cover, 148 pages. Size, 5 in. wide by 7⅞ in. Per copy, $4.75. Order direct from Philosophical Library, Inc., 15 East 40th St., New York 16, N. Y.

Raises News Ink Prices

News ink prices are being raised by J. M. Huber Corp., manufacturer of printing inks and other products, it was announced by J. S. Hart, jr., vice president of the Ink Div. The new prices are, in some cases, 20% higher than those last announced April 1, 1956. The average increase is approx. 12%. Since the last price increase, oils used in the manufacture of news ink have risen over 20%, Hart added. Carbon black, another major ingredient, has advanced 5%. Rail freight has gone up 7%. Wages and salaries during the same period have increased.

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Equipment Sales and Installations

Reports

The Monomelt Co., Inc.

The Monomelt Company, Inc. announced recent installation of its Heavy-Duty Hydraulic Rotary Shaver as follows: Sunnyvale Standard, Sunnyvale, Calif.; Star Journal Pub. Co., Pueblo, Colo.; Kokomo (Ind.) *Tribune;* Free Press Co., Mankato, Minn.; Journal Pub. Co., Albuquerque, N. Mex.; Oswego (N.Y.) *Palladium Times;* Winston-Salem (N.C.) *Journal-Sentinel;* Sandusky (O.) *Register Star News;* Daily Local News Co., West Chester, Pa.; York Composition Co., York, Pa.; York (Pa.) *Dispatch;* The Freeman Printing & Pub. Co., Waukesha, Wis.; *LeDroit,* Ottawa (Ont.) Can.

●

Beard Chases

Beard Newsprint & Warehouse Co., Inc., reports a number of recent aluminum Dural newspaper chase installations. Among the installations are: Dayton (O.) *Daily News,* three one-piece double-truck chases and 19 single page chases. The Chico (Calif.) *Enterprise-Record,* Concord (Calif.) *Transcript,* and Rialto Publishing Co. in December 1956 installed Dural chases. The San Jose (Calif.) *Mercury-News* has installed 24 additional chases. The Spartanburg (S.C.) *Herald-Journal* in December commenced using 16 Dural chases.

●

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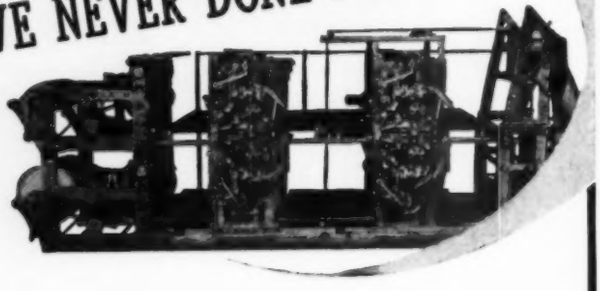

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For More Information Circle 68 on Reader Service Card

The Goss Printing Press Co.

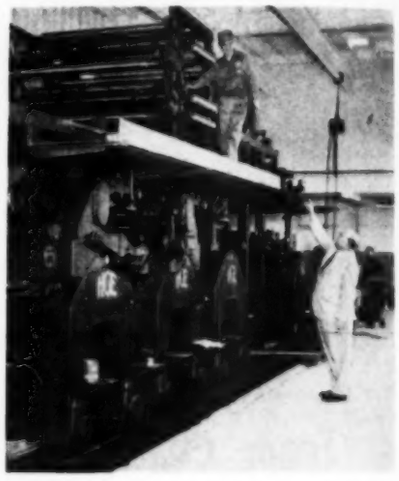
The Jackson (Tenn.) *Sun* has purchased a Goss six unit Universal press with superimposed color cylinder and balloon former folder. The new press will replace a 16-page Duplex Standard Tubular press, tripling capacity to 48 pages. Also ordered is a Goss Plate Perfector for producing precision color and black stereotype plates. Albert A. Stone is publisher and general manager of the *Sun.* Fred Haskins is production manager. P. W. Rushing is pressroom foreman.

●

R. Hoe & Co., Inc.

Purchase of a new Hoe Color convertible press will enable the Bellingham (Wash.), *Herald* to offer its advertisers four color ROP on as many as eight pages. Officials say they also expect to print eight pages of color comics. Scheduled for April installation, the equipment will consist of a sextuple, three unit press with double former, and single delivery folder. Color equipment will include one color cylinder with four compartment ink pump and two reversible couples arranged for process color printing.

Installation of a line of Hoe Color Convertible presses by the Las Vegas (Nev.) *Review-Journal,* according to the publisher, is the only one of its size (circ. 21,000) in the country with four-color equipment. Set up in the daily's brand new building, the four unit press operation, with provision for expansion to a six unit 96 page press, can be used to produce a 64 page newspaper with spot color on 32 pages at speeds up to 45,000 papers per hr. Up to 16 pages of comics in full four color can be printed. The new equipment cost substantially over $300 thousand, and replaced a Hoe 32 page Simplex press. Shown standing in the illustration is Gen. Mgr. A. E. Cahlan. Pressroom Foreman Andy Beatty is on the catwalk.



Pretentious Broadside

As a part of the observance of International Printing Week, Graphic Arts Assoc., Kansas City, Mo., prepared and distributed some 3500 broadsides entitled *Get Ready for a Greater Tomorrow.* The broadsides were lithographed in two colors on both sides, and opened up to a 35 in. by 45 in. aerial view of the downtown area of Kansas City.

There has been a terrific response on the part of local civic and business leaders to acclaim this publicity piece. A limited number of unfolded pictures were distributed for framing.

Wm. R. Brown, president, Chas. E. Brown Printing Co., and S. D. Goller, president, Fine Arts Lithographing Co., were co-chairmen of the committee handling preparation and distribution of the broadside.

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The Original Electronic Eliminator

INCREASES PRODUCTION—REDUCES WASTE
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SAFE TO USE • NO HARMFUL RAYS OR GASES
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For More Information Circle 114 on Reader Service Card

"Using Filmotype* is like having 1,000 extra salesmen

says:
Saul Lehman, President, The Georgian Press, Inc., New York City

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- Automatic color spacing for exact letter-spacing.
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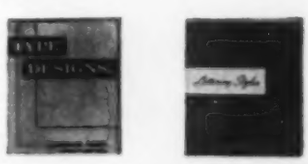
Filmotype catalogs prove that there's a Filmotype alphabet for every printing job . . . alphabets that sell for you!



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ALBANY TALLOW LUBRICANTS ARE THREE TIMES AS EFFECTIVE AS ORDINARY LUBRICANTS.

- **ALBANY GREASE NO. 3** . . . for presses equipped with grease cups.
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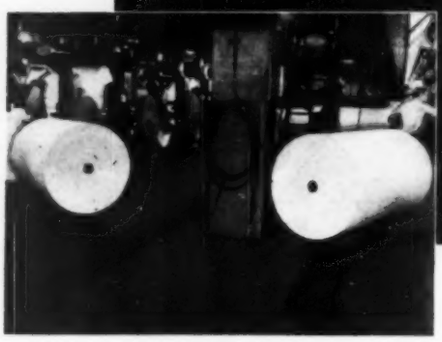

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The ease and versatility of modern newsprint handling shown here . . . through a definite path of travel that helps to reduce white waste and floor wear . . . clearly demonstrates the utility and efficiency of Jampol handling methods and equipment. Jampol, with more than 30 years of specific experience, can as readily design and build the equipment and system to meet your particular needs perfectly. If you are interested in better handling at lower cost for greater return, Jampol will welcome the opportunity to discuss your problems.

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SAWS • ROUTERS • MORTISERS

Stereotype Saws Three Sizes

Curved Plate Routers Tubular or Semi

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Special Routers Built To Order

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For More Information Circle 119 on Reader Service Card

The Spotlight is on

George H. Fuller

One of printing's outstanding mechanical executives who has had a rich and fruitful life in his chosen profession is George H. Fuller. He is retiring from active duty the first part of this month as stereotype superintendent of the Cleveland *Press*. He has completed 50 years of association with that paper. However, he will be retained by Scripps-Howard Newspapers to advise with respect to equipment layout for the Cleveland *Press*' new building in Cleveland, as well as to serve in an advisory capacity for other papers in the S-H group.

Temporarily, at least, Fuller's friends can reach him at 19360 South Sagamor Blvd., Fairview Park 26, O. Eventually, he and Mrs. Fuller anticipate locating in one of the garden spots on the West coast of Florida.

George Fuller has been a consistent investigator of methods, ways

and means for improving stereotype plate production throughout his career in the newspaper field. He has been consulted by newspaper executives and by advertising agencies regarding many of the thorny problems associated with furnishing plates and/or stereo mats sent out by agencies for national advertisers. His work in this field has been particularly valuable especially with respect to an almost "unstandardizable" product. He has been through the mill in helping educate those who did not understand the peculiar requirements of the stereotype platemaking process in the daily newspaper field.

Fuller is also an enthusiast regarding ROP color printing. His work with Fred Alexander, engraving superintendent, and Paul Brannon, pressroom superintendent, of the *Press* is well known. He also participated for a long time in investigations about ROP color printing at ANPA mechanical conferences. Fuller's motto here was: "It's an elusive subject, but we'll keep after it."

Perhaps, in Fuller's mind, is the important part he played in organizing the Great Lakes newspaper mechanical conference. In fact, he was the first president. He served as president for the first two years. Since that time, he has always made himself available for any kind of association work thrust upon him by successor presidents. He has not only served as chairman of a number of conferences but has also assisted in formulating conference programs from time to time.

The Great Lakes conference is one of the most valuable of the regional technical conferences. Attendance has ranged upwardly to 1000. In George Fuller's view, there was always consciousness for the necessity for good fellowship, but at the same time the passing along of latest technical information at the annual conferences was uppermost in his thoughts.

Another of Fuller's accomplishments was organization of the Fourth Estate Credit Union 19 years ago at the *Press*. Starting with total assets of $70, the Union now handles around $30 thousand monthly in making loans to employees. Assets reportedly are $500 thousand. Fuller has been its president.

Fuller has two sons. Elmer is production coordinator at the Cleveland *Press*. The other son, Glenn, manages the A. Ray Lawrence Insurance Agency in Cleveland.

George Fuller has been an extremely useful person in the newspaper printing industry. He will continue his usefulness. Happy days, George!

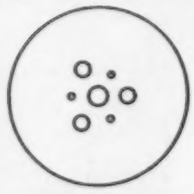
Carbide!

GAY-LEE PRINTERS'

"Carbide Thinsaw"

Patented Carbide Tips Cut Base, Slugs and New Alloys Including Dowmetal

The famous, long-lasting Gay-Lee Carbide "Thinsaw" is "standard" in many large composing rooms . . . and there are good reasons why it should be in *yours*, too. This saw design with more teeth gives you cleaner cuts, freedom from burrs, excellent back rake cutting . . . without scream, pileup or sticking. It eliminates need for trimmer blades. Patented design holds carbide tips firmly against side thrust, while extra strong braze secures them for life. These saws outlast all others, soon pay for themselves. Just $39.50.



Type A Printers' "Thinsaw" 7" Diameter, 40 teeth, for Hammond Saws

Type B Printers' "Thinsaw" 6" Diameter, 36 teeth, for J. A. Richards, Nelson, C. & G., Morrison, Nolan, etc. saws

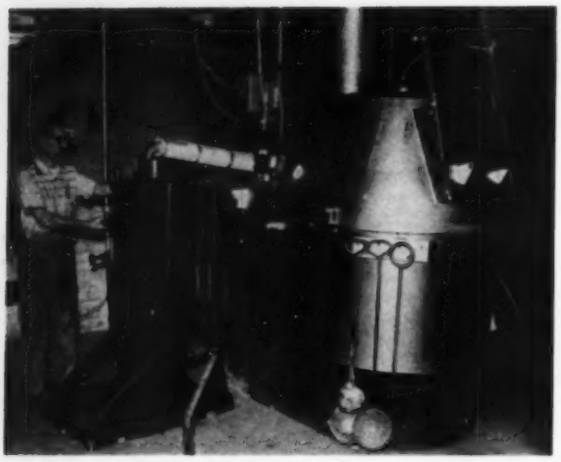
TRY IT FREE FOR 30 Days!

Yes, try a Gay-Lee Carbide "Thinsaw" at our risk for thirty days. If not completely satisfied with the saw's performance, just return it for full credit. You can't go wrong, so *act now!* (*IMPORTANT: Specify make of machine on which saw is to be used.*)

GAY-LEE COMPANY

CLAWSON • MICHIGAN

For More Information Circle 54 on Reader Service Card



United American Stereo Furnace—A double insulated oval stereotype furnace (from 10,000 lbs. capacity and upward) with conical-type, totally-enclosed heavy gauge steel hood, has been announced by United American Metals Corp. Features of the unit include: Arches in hood for stereotype pumps; swinging door with platform for charging the furnace with plates, tail pieces and pigs of metal; sliding door for cleaning and drossing metal; and dome light in hood to aid in cleaning and drossing metal. The furnace is equipped with atmospheric-type burners, automatic indicating temperature control with safety pilot, and heavy gauge welded steel crucible with ring welded around flange to prevent metal from overflowing. For further information, please circle No. 271 on the Reply Postcard.

Fast Color Coverage of Presidential Inauguration

Progress in newspaper color photography was made in Washington, D.C., recently when United Press Newspictures cut in half the time needed to process color pictures of the Presidential Inauguration for newspaper reproduction. This was made possible by use of Eastman Kodak Co.'s experimental Ektacolor Film Type S panchromatic paper which is sensitive to all colors.

United Press Newspictures completed processing the color photographs within 2 hrs. after the undeveloped films were received at their photo labs.

In this method, a color negative is printed onto the experimental paper through three different color filters to isolate a portion of the spectrum. The three black and white prints which result may then be transmitted by wire or sent directly to newspaper engraving departments, where color engravings are made from them.

LINOTYPE-INTERTYPE MATS—NOW COST 30¢ & UP

Can you still afford to throw them away because of bad alignment?

The *Align-A-Mat*

This simple device will double and triple the life of your working fonts. It will restore to factory standard hundreds of mats ready to be discarded. When sorting up fonts, old mats corrected on the **Align-A-Mat** will align perfectly with new ones. Distributor stops due to the lugs worn short will also be eliminated. **Price $125.**

EVERY MAT SAVED IS 30¢ SAVED

Now in use in hundreds of leading plants here, in Canada and abroad.

Please write for literature.

FISK, 130 W. 46th St., N.Y. 36, N.Y.

Circle 51 on Reader Service Card

NEW DIFFERENT EVA-PRESS

HAS NO EQUAL
Speeds Rubber Plate Production

Top Accuracy Plates —Finest Quality

IMPROVED FEATURES

- Exclusive Pre-Heat Table
- Powerful Construction
- Precision Built
- Motorized Push-button Operation
- Platens Electrically Heated Thermostatically Controlled
- Three platen sizes 13" x 18"—12" x 15"—11" x 13"

TOPS IN EVERY RESPECT MAKE US PROVE IT

AMERICAN EVATYPE CORPORATION
743 Osterman Ave. Deerfield, Illinois

For More Information Circle 6 on Reader Service Card

Here is what T&P offers:

- Fair price
- High level quality
- Clear warranty of customer satisfaction
- A quarter century of honest dealing

Miehle Verticals V-45 & V-50 • Miehle 41 Single & Two Colors • Miller Simplex • Miller Models SY & TY 28x41 all 4 track units, auto oiling—single and two color presses • Seybold 40" 10Z cutter Seybold 40" Precision Autospacer • Diamond 34½" No. 26874 • Kelly B, No. 1 & No. 2 presses • Cottrell 64 pg. rotary magazine press • Cottrell 5 color sheet fed 32x47 • Goss 95 page Two Color rotary magazine press • Chief 22 offset press

TYPE & PRESS of Illinois Inc.

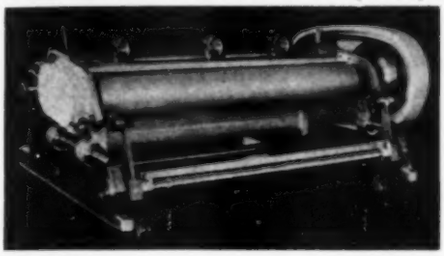
3312 N. Ravenswood Avenue, Chicago

For More Information Circle 139 on Reader Service Card

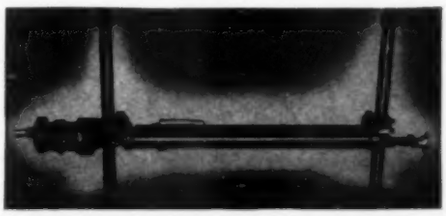
HUCK AUTOMATIC WEB CONTROLS

Completely automatic, mechanical, controls for high speed, wide web presses.

TENSION CONTROL – Carriage Type - Accurately maintains a constant predetermined tension on the web at all press speeds.



WEB SIDE REGISTER - Holds web accurately in side register at all press speeds. Corrects instantly without hunting.



HUCK CO. 37 WALL ST., New York 5, N.Y.

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EXPERIENCE . . .

We have assisted more than 70 newspaper publishers and printers with plant and production problems. Such a reservoir of experience may be useful to you if you face similar problems.

ROBERT W. DICKERSON

2063 East Fourth Street Cleveland 15, Ohio

NEWSPAPER & PRINTING PLANT ENGINEERING

For More Information Circle 43 on Reader Service Card

UNIFORM INFRA-RED Pre-drying for High Shrinkage Mats

in the ALICO Evenray Mat Drier

Over 340 in use

USERS REPORT:

- Type Sharper
- Halftones Clearer
- Greater depth of mou'd
- Plates wear longer
- Uniform drying
- Less drying time

. . . and now AUTOMATIC when equipped with DEVICE to feed and eject mats automatically

ALICO, Inc. MONTAGUE, MASS.

For More Information Circle 5 on Reader Service Card

Always a Jolly Boss, except . . .

Foreman Jim is noted for his even temper.

But there are exceptions.

Exceptions come when somebody tries to persuade him to try some mat other than Certified.

"No, siree," he roars. "Certifieds got me out of a bad jam, some years back. And they have kept me out of jams. They are quick performers and give all I could ask in the way of results."

For dependable stereotyping rely on Certified Mats

Certified DRY MATS

CERTIFIED DRY MAT CORPORATION, 555 Fifth Avenue, Dept. M, New York 17, N. Y.

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PRINTED MATTER TIED The "SAXMAYER" way

Insures a Secure Package

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MODEL SRA-57

Both automatic and manually operated.

Uses jute or sisal, single or cross-tie

Literature on request.

NATIONAL BUNDLE TYER COMPANY

Dept. N

Blissfield, Michigan

For More Information Circle 102 on Reader Service Card

Guinea Pigs and Dry Mats...

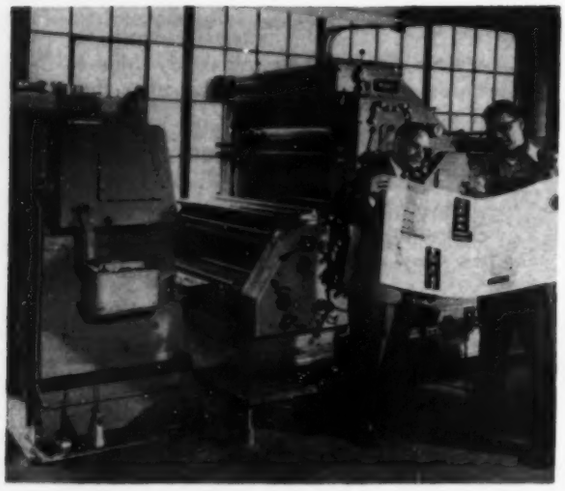
• Guinea Pigs are symbolical of experiments. A stereotyper could experiment with half a dozen brands of mats and possibly get a dozen varying results. But why make a Guinea Pig of your operations? Have Beveridge Improved Mats take the gamble out of mat buying. Standardize on Beveridge and get the best results possible for your work. That goes for either syndicate or newspaper work. One order will convince you.

New Products Division

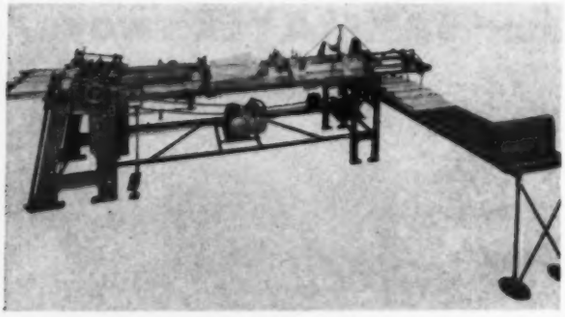
THE BEVERIDGE PAPER CO.

Indianapolis 4, Indiana

For More Information Circle 18 on Reader Service Card



Two Miehles on West Coast—Two No. 38 Two Color Miehle Offset Presses were installed in San Francisco, Calif., recently. One went into the plant of James H. Barry Co., and the other (pictured here) was installed at Chas. Wood and Associates. These two presses were the first of the No. 38 machines to go into the San Francisco area. Shown here are Harold Iverson, territory manager for Miehle Printing Press & Mfg. Co. in San Francisco, and Merrill A. Morrison, a partner in the Chas. Wood and Associates printing firm.



Hickok Banding Machine—The W. O. Hickok Mfg. Co. reports a banding machine, Model No. 3, that automatically bands paper and paper products measuring up to 18 in. in unbanded direction, 12 in. in the banded direction, and up to 1½ in. in depth or thickness. Paper or paper products from 12 in. in either direction and up to 2 in. deep can be handled with the Model No. 3. Dimensions are: 3 ft. 6⅝ in. to 11 ft. 2⅛ in. Conveyor delivery is 1 ft. 8 in. by 8 ft. For further information, please circle No. 273 on Reply Postcard.

Dexter Assigns Hourigan—Dexter Folder Co. announced appointment of Richard Francis Hourigan from New York to its Chicago office. Hourigan attended Colorado School of Mines and served 4 yrs. in the U.S. Navy.

Adds 5000 Sq. Ft.—Ortman-McCain Co. has added 5000 sq. ft. to its factory according to Arthur C. McCain, general sales manager.

Automatic Conveyor

(Continued from Page 75)

reach, for cutting the motor off in case of emergency.

Function of Switches

Switches are used at critical points in the system to: (1) insure that the gig is never overloaded, (2) prevent overloading of the final long conveyor section, and (3) control the operation of the gig.

At both vertical conveyor entrances a micro switch is activated when a plate passes over it into the conveyor. Should a second plate contact this switch before the gig has returned to proper loading position, the switch will stop the entire conveying system.

On the final inclined section, of the system, two switches

Gentlemen... **Let us PLAN your COMPOSING ROOM**

with MONEY SAVING—TIME SAVING Equipment

As ex-newspaper men — we plan from practical experience. We custom build to suit your requirements at mass production prices.

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Name and Title_____

Company Name_____

Company Address_____

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MARCH '57

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PRINTING EQUIPMENT *Engineer*

FIRST CLASS
PERMIT NO. 2205
CLEVELAND, OHIO

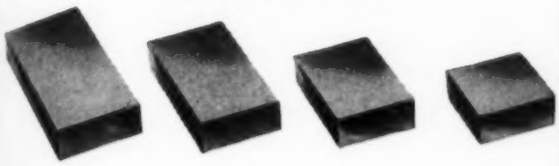
BUSINESS REPLY CARD
No Postage Necessary If Mailed In the United States

4¢ POSTAGE WILL BE PAID BY

PRINTING EQUIPMENT *Engineer*
1276 WEST 3rd STREET
CLEVELAND 13, OHIO

READER SERVICE DEPARTMENT

MAGNESIUM BASE



●The ideal newspaper base. One sixth the weight of old-style base. Durable and easy to handle. Precision finished to .001″ in height. Available in all heights and sizes. Larger sizes make perfect, light-weight proof press beds and molding slabs. Inexpensive, too.

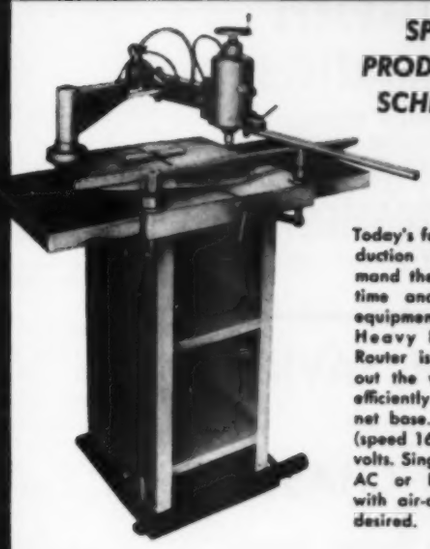
WRITE FOR NEW PRICES Free descriptive bulletin and prices sent promptly.

THE MONOMELT COMPANY, INC.
1611 N.E. Polk, Minneapolis 13, Minnesota

For More Information Circle 98 on Reader Service Card

ANOTHER NOLAN TIME-SAVER

HEAVY DUTY
RADIAL ROUTER



SPEEDS PRODUCTION SCHEDULES

Today's fast-moving production schedules demand the most efficient time and labor-saving equipment. The Nolan Heavy Duty Radial Router is built to turn out the work fast and efficiently. Rugged cabinet base. 1 H.P. motor (speed 16,750 rpm) 110 volts. Single phase only, AC or DC. Available with air-driven head if desired.

KEEP ROLLIN' BUY NOLAN

Write, wire or phone for complete information.

NOLAN Corporation
Dept. 723 Rome, New York

For More Information Circle 105 on Reader Service Card

are positioned to prevent overloading when the conveyor is moving in an up direction. One switch, located near the end of the conveyor, actuates a red light on the control panel as a plate passes over it. This signals the loader not to place another plate in the system. About 20 ft. past the first switch a second switch cuts off this red light and actuates a green light on the panel when the plate has passed it.

If the operator fails to see these warning lights, the switches at the gig entrance will prevent overloading of the gig. The time sequence between the flashing of the red and the green lights is exactly coordinated with the movement of the elevator, which makes a round trip between floors in the time interval between the two signals.

Paint-Lighting

(Continued from Page 46)

Painting Machinery

Painting machinery, work benches and other work equipment in contrasting colors is an aid to easy seeing. This naturally applies to machinery where stationary parts should be painted a quiet color of medium reflectance which is harmonious with the wall and dado colors, although rather deeper than the dado to provide contrast, and grayer than either wall or dado because viewed at closer range.

Moving parts of machinery and those parts against which the operator sees his work call for contrast painting in a light color. This, of course, is as much in the interest of safety as of easy seeing, the two being inseparable in danger zones.

In a practical paper presented some time ago at a meeting of the Research and Engineering Council, Francis Scofield, assistant technical director of the National Paint, Varnish and Lacquer Assoc., gave a brief outline of the different kinds of paints available and suitable for the interior of printing plants. He explained that the colors needed can be obtained in practically any kind of paint, the gloss range in many of them, and that interior paints can be broadly divided into water-thinned and solvent-thinned.

Paints To Serve Purposes

Solvent-thinned paints formerly used as vehicles for rather heavily bodied oils have been superceded by oleoresinous varnishes and alkyd resins. Flat, semi-gloss and gloss paints are made with both these vehicles and give excellent hiding, very good resistance to washing and abrasion, and good

Encyclopedia Printed by Web Offset—Rand McNally & Co., Skokie, Ill., has installed a new ATF web offset press for printing the Encyclopedia Americana for 1957. According to ATF, cylinder speed of the press is 12,000 r.p.h. It will print 64 pages with each cylinder revolution thus producing two 32 page signatures or four 16 page signatures, folded and ready for binding.

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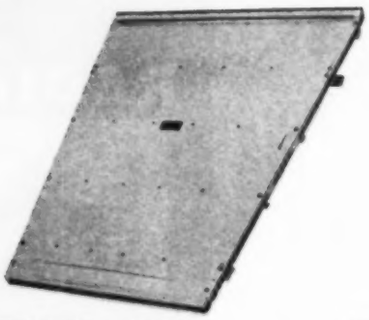
LINOTYPE
MAGAZINES

IMMEDIATE DELIVERY FROM
YOUR NEARBY MONTCO DEALER
OR DIRECT FROM



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- ALUMINUM TOP PLATE
- BRASS BOTTOM PLATE
- STEEL FRAME • EXTRA DOWELS
- FULL LENGTH—35#
- LOWER SPLIT—19#

FULL LENGTH—$176.00
LOWER SPLIT—$154.00
LIGHTWEIGHT WITH SERVICEABILITY

MONTGOMERY COMPANY, INC. • BOX 309, TOWANDA, PA.

For More Information Circle 99 on Reader Service Card

PAPER SAVING
and
THE CHASE

• Increasingly greater accuracy in moulding newspaper pages is demanded of the Stereotype department when column or column rule width is changed so as to print on narrower or wider paper.

Your chases should be checked CAREFULLY.

Much time can be lost and a poor printing job produced if the Stereotyper has to work with mats that are made from faulty chases.

The chase is a piece of stereotype equipment and must have bolsters and/or lines to the proper specifications to work with the casting box.

AMERICAN STEEL CHASES give the maximum in strength and durability. They are manufactured carefully to meet every requirement of the composing room as well as the Stereotype department.

Contact us through your local dealer. Your chases may need only slight corrections for your page size change. A call on us may save you time and money! Only accurate chases can give you accurate mats!

ALUMINUM CHASES

We can supply stereotype chases made of aluminum for those who want lightweight chases. They will be made to the same design as the steel chases but will have overlapped and pinned corners, not welded.

AMERICAN STEEL CHASE CO.
31-31 48th Avenue • Long Island City, N. Y.

Circle 9 on Reader Service Card

adherence to various surfaces.

Special vehicles may be used for specific requirements such as chlorinated rubber to provide high abrasion, water, acid and alkali resistance, in finishes which are frequently used for concrete floors. Where spilling of solvents is present the phenolic varnishes are better.

Water-thinned paints are low in cost but do not have the washability or high gloss of the best enamels, although modern paints of this type give a finish which meets many requirements. Calcimine is a water-thinned paint in which glue is used as a binder and has low water-resistance (and therefore poor washability) but is useful for certain purposes. In other water-thinned paints, Portland cement is used as a binder and they have very good water and alkali resistance. They are good for rough walls and walls which are damp.

The so-called latex paints are water-thinned and dry quickly, have a low odor and gloss and are washable, which makes them satisfactory for many purposes. As Scofield explains: "The choice of a particular paint for a given job must be the result of a combination of decisions. There is rarely one best paint. Nearly always there are several, each of which is superior in one or more features. The user must decide the relative weight that each of these features has in his thinking, and choose the paint accordingly." Elsewhere he points out that the paint industry can furnish any color and gloss required and the selection is the responsibility of the lighting engineer since the paint cannot be separated from the kind and placement of the lights.

Lighting Installations

To show how these various ideas are put into practice it will be interesting to consider a few lighting installations. For instance, in the printing plant of the Antelope Valley *Ledger-Gazette,* Lancaster, Calif., the page makeup trucks are mounted on casters underneath fixed overhead lead and slug racks. Underneath each rack are mounted four 48 in. fluorescent lamps with standard asymmetric reflectors, 2 ft. above the page forms and 1½ ft. below eye level so as to be shielded from the workers' eyes. The illumination on the forms is maintained at 175 foot-candles.

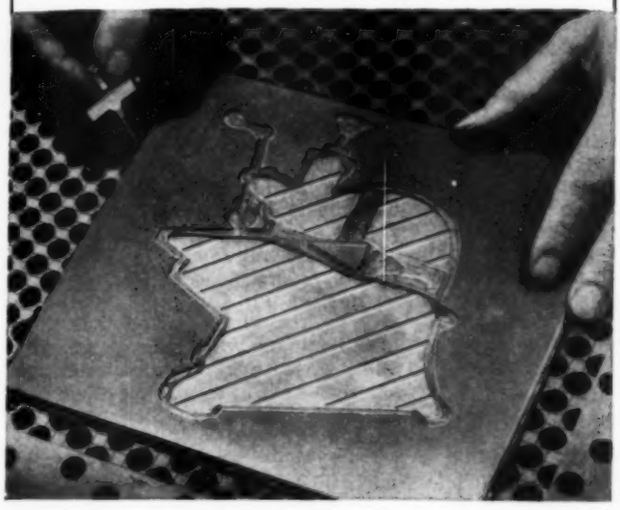
In the commercial printing department of this shop the small presses are shown in Fig. 1. On the press at the left is shown sup-

Heidelberg Prints on Plastics—The M & M Mfg. Co., Pasadena, Calif., specialists in printing on plastics, installed a new 21 in. by 28 in. Original Heidelberg Cylinder. The press is shown combined with conveyor installation necessary in this type of work. Standing around the press are (left to right): Norm Barker, head pressman; Jerry Eddings, Heidelberg sales representative, and John P. Walker, plant manager.

PMC STERLING TOGGLE BASE

Precision ground to give an accuracy unequalled by other methods of machining PMC Sterling Toggle Base in magnesium or semi-steel simplifies lock-up—saves time—increases profits.

THE PRINTING MACHINERY CO.
436 Commercial Square
Cincinnati 2, Ohio



For More Information Circle 116 on Reader Service Card

LEADING IN DEPENDABLE PERFORMANCE

Wood Dry Mats enjoy a rich heritage of quality that begins with having been—"First in the Field" and extends down to the present day.

WOOD FLONG CORPORATION
HOOSICK FALLS, N. Y.

WOOD DRY MATS
ALWAYS UNIFORM

New York City Office
551 FIFTH AVENUE, NEW YORK 17, N. Y.

For More Information Circle 149 on Reader Service Card

NEW MODELS
BREAKING
ALL RECORDS

Profit records for YOU . . .
NEW FEATURES
greatest advance in Folder history
. . . doubling your net profits . . . for instance,

2 folded signatures (from a single sheet fed into Folder) now come out where one came out before—of course in 1 automatic operation. And . . . from a single sheet fed into the Folder—you can have two separate sheets collated and folded together . . . of course in 1 automatic operation.

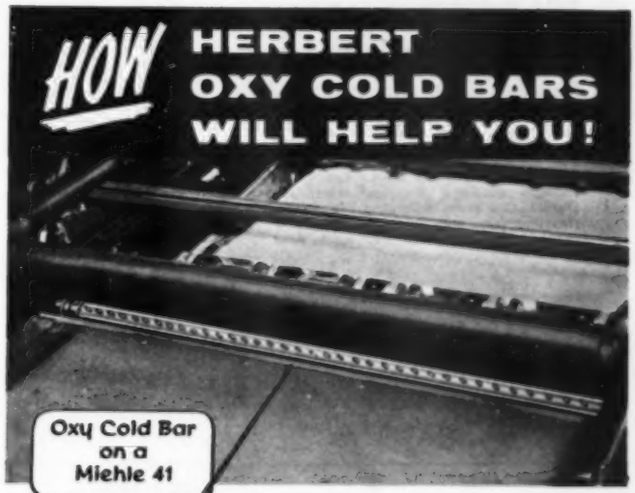
Thanks to you for ordering $50,000,000. of BAUMFOLDERS, volume production keeps prices down . . . even in these days of high labor costs and high material costs, you can still install a 17½ x 22½ Automatic Bindery complete in one compact life-time "Gold-Mine" . . . that folds; cuts; scores; perforates; collates, etc., etc. for only $85. initial and $47. a month. It will pay-for-itself many times over before you pay for it. No finance charge . . . just simple interest. And other sizes comparable pay-for-itself terms . . . 14 x 20" or 22 x 28" or 25 x 38" or 31 x 46-60".

RUSSELL ERNEST BAUM, INC.
615 Chestnut St., Phila. (6) Pa.

P.S. Someone said,—"he benefits humanity who makes 2 blades of grass grow where one grew before."

For More Information Circle 16 on Reader Service Card

HOW HERBERT OXY COLD BARS WILL HELP YOU!



By eliminating static on your equipment—web or sheet fed, offset or letter press, folders, bag machines, etc., your production becomes smooth and uninterrupted. Quality is improved. Register is sharper. Jogging is neater . . . folding more accurate. Tearing and spoilage is eliminated. Oxy Cold Bar neutralizes all types of stock . . . operates electrically with absolute safety. No shock . . . no spark! It's compact and can easily be installed at the trouble spot.

Send us specifications of your equipment for full information and proposal.

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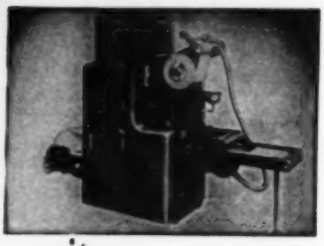
for new, faster methods of printing, investigate Speed Flex



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117 West 9th St., Los Angeles 15, Calif.

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Designed and sold exclusively by Orville Dutro & Son. Made by Western Gear, manufacturers of gears and special machinery for industry since 1888.

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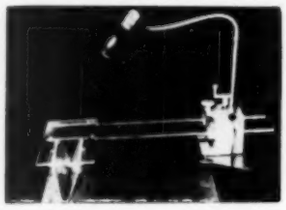
Now! GUARD The Saw - SEE The Saw



STOP THE CHIP SPRAY, TOO with the new BRETT-GUARD "TENSEE" SEE-THRU VISUAL SAFETY GUARD

Visibility for all operations
Fits All Stereo Saws.
For Safety's Sake Write Today
Specify Saw Mfgr's. Name.

The INDIANAPOLIS STAR-NEWS, Indianapolis, Ind., stereotype department has the above TENSEE in actual use because it really prevents accidents.

Protect your Operators with "TENSEE" 30 Day Free Trial.

BRETT-GUARD CO. Dept. PE
Englewood, N. J.

For More Information Circle 21 on Reader Service Card

plementary, or localized, lighting. General lighting has been designed to be sufficient to avoid too great contrast with the high leyel lighting over the imposing stones and at other points. For the area shown in Fig. 1, general lighting is provided by two-lamp, 96 in., 430 ma. slimline units with eggcrate louvers and upward component, the fixtures being mounted in four continuous parallel rows 12 ft. apart, giving an illumination of 55 foot-candles.

The rafters and trusses are painted white, the walls pastel green and the concrete floor is unpainted. All equipment, including the presses, is painted gray.

Newspaper Pressroom Lighting

An interesting pressroom lighting job, in the plant of the Portland (Ore.) *Journal*, is pictured in Fig. 2. In this case it was necessary to provide three levels of illumination. This consisted of general illumination, localized general lighting over the pressmen's platform and localized general lighting under the platform. The ceiling is 23 ft. high and the other dimensions of the room are 73 ft.wide by 152 ft. long.

General lighting is maintained at 45 foot-candles by six continuous parallel rows of Benjamin Type E Lite Line 40 luminaires with hinged dust tight glass covers, the latter being particularly important because the air in this space is permeated with ink mist. Each unit is supplied with three 40 w. white lamps, the rows being alternately 10½ ft. and 14¼ ft. apart and 23 ft. above the floor. There is an almost continuous row of similar units on each side of the press under the pressmen's platform at 7½ ft. above the floor and another similar arrangement 7½ ft. above the platform.

As for painting, the ceiling is pale yellow with a reflectance value of 83%, the walls are beige with 69% reflectance, the columns are salmon having a 62% reflectance factor and the press and other equipment are dark blue with 9% reflectance. The floors are wood with 30% reflectance.

In Fig. 3 is shown a view in the pressroom at the Sayers Printing Co., St. Louis, Mo. This is a commercial printing plant with its production area in a converted former grocery warehouse. The very up-to-date lighting installation has as one of its quality features an upward component of 51% of the total light output. Direct-indirect luminaires are equipped with de luxe lamps and provide 50 foot-candles of illumination. The photographs show the arrangement of the luminaires which, it will be seen, are shielded by louvers.

Good seeing is enhanced by the light colored ceiling consisting of acoustical tile with high reflectance without glare and by the light colored floors.

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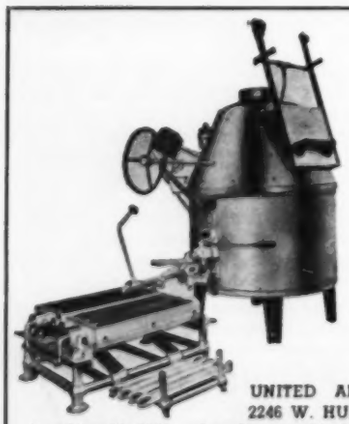

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Newspaper Promotes Type Changeover—Examining the Philadelphia *Inquirer's* new body type are (left to right) Mechanical Supt. Sol Swartz and Managing Editor John Gillen. Promoting its new body face as "The Best Type in Sight," the *Inquirer* recently changed to 8 pt. Linotype Corona. At the same time the newspaper changed to 5½ pt. Corona for market items, and 9 and 10 pt. Corona for news lead-ins and editorials.

ROP Color

(Continued from Page 79)

quence is recommended: Yellow, red, blue, and black (where used).

Dead Metal and Plate Identification

All inside dead metal should be retained (leave ⅛ in. to ¼ in. margin around subject matter) and marked clearly as dead metal. To avoid any possible confusion and error in subsequent departments and for quick, accurate identification, stamp color of the plate on dead metal in each plate. Also, clearly identify the top of each plate.

Dropouts

Run tone overall in all process color plates, thus avoiding hard edges common to color dropouts in subject matter. When dropouts cannot be avoided, the engraver should single tool all screen edges

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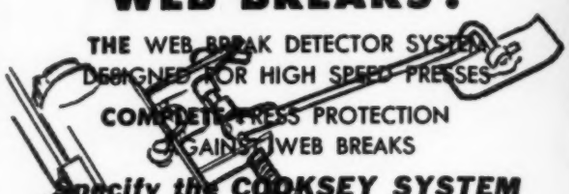

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to help prevent hard edges. In any event, overall tone is preferred.

Although vignettes are difficult to produce by any printed medium, they are particularly difficult to reproduce in newspapers and should be avoided. If they must be used, they should be etched to maximum depth and sufficient dot area retained to withstand molding.

Equipment Considerations

Although space limitations do not permit detailed discussion of equipment requirements, a few observations appear to be in order. In connection with the engraver's camera, although it is possible to use a black-and-white camera for color when using the three-color process, a precision color camera is preferred. Since careful control all along the line is a must, a precision color camera will aid considerably in maintaining the necessary control. With such a camera on hand you also have the added flexibility of producing conventional four-color process work as well as handling some types of copy direct in the engraver's camera for three-color process. Better distribution of the workload between the color photo lab and the engraving department would also be possible.

A 75 line circular screen will assist in producing a good volume of consistent quality work and the camera arc lights should be current controlled and equipped with a light integrator.

The overall color engraving area should be temperature and humidity controlled and the darkroom should, in addition, be equipped with a temperature controlled sink.

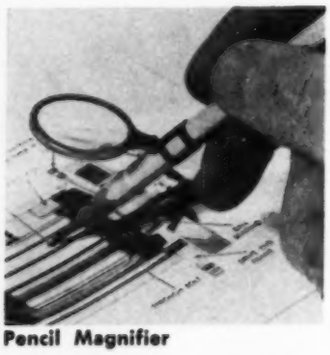
A four color proof press would be invaluable to properly execute wet proofing, but if the volume does not justify the investment, a two color proof press can be substituted.

Although high speed etching should be given serious consideration in connection with your black-and-white operations, it should also be considered an ideal procedure for etching uniform quality color plates.

Registration System

Although the majority of newspapers register color plates on stereo base in various ways, following is a brief report of the registration system in use at the *Herald*. The system at the outset makes use of an accurate punch such as Vandercook's precision 3/16 in. punch specifically designed for this purpose.

All color components to be carried on one page are assembled on a 0.150 in. thick magnesium dummy base (printed page size) for mounting. This 0.150 in. magnesium base is in one piece and when the color components have been mounted on it the whole assembly is put on a 0.705 in. thick solid one-piece mag-



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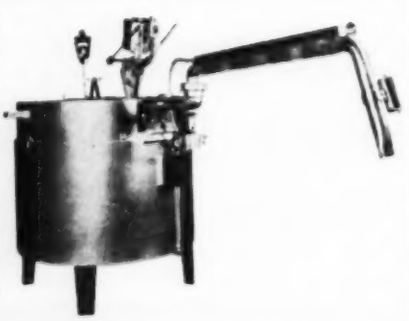
Thanks



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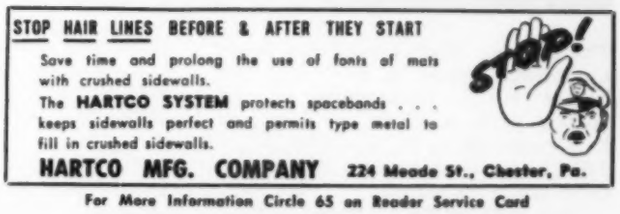
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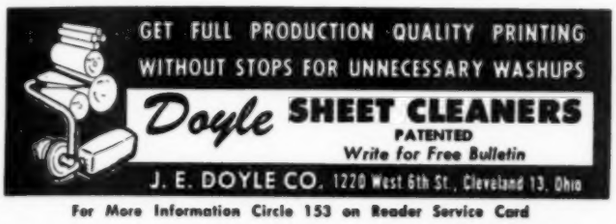
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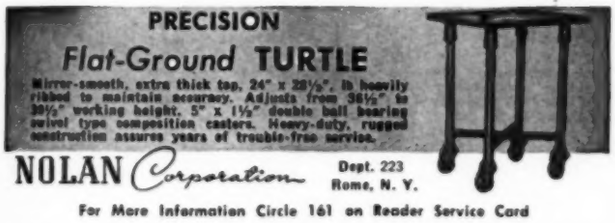
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nesium dummy for hot molding. Using the same metal throughout eliminates differences attributable to varying coefficients of expansion under heat.

After the key color plates are positioned in accordance with the page layout, weights are put on the plates to hold them in place until the register holes are drilled. The weights were simply made up from solid stereo base approx. 6 in. by 6 in. with a standard hardware equipment handle mounted on top for ease of handling. The bottoms of these weights are faced with stereo molding cork to protect the cuts.

All the tools required by this system are shown in Fig. 13. The drill was built to specifications at the *Herald* and operates at a speed of approximately 1800 rpm, using a ¼ in. chuck with ⅛ in. adapter.

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Mexican Lithographers See Davidson Dual-Lith—Representatives of the Mexican lithographic industry visited Mergenthaler Linotype Co. and its subsidiary, Davidson Corporation, in Brooklyn on Jan. 14. The visitors saw a demonstration of the Davidson Dual-Lith Model 251 press. From the left are Theodore Markow, representative of the International Cooperation Assoc., under whose auspices the group toured major U.S. lithographic centers; Carlos Portillo; Fernando Aranguren; William Moran, of Davidson Corporation; Eduardo Torres; Benito Zamura; and Luciano Lopez.

The outside diameter of the basic aluminum casing is 4½" and the height 10½". Dimensions of the bottom plate are 3 in. by 4 in. and it is made of ⅛ in. tool steel. The drill body is fastened inside the tube via a mandrel.

The drill guide is fitted with a 3/16 in. boss or shoulder with ⅛ in. center which insures drilling vertically. The 3/16 in. boss on the drill base plate fits into the 3/16 in. Vandercook punch hole in the plate and a ⅛ in. hole is drilled in the 0.150 in. base. The top of the register pin is 3/16 in. o.d. which makes a press fit when mounting the plates.

In Fig. 14 is shown the drill mounted in position ready to drill a register hole with the ⅛ in. diam. drill. The 3/16 in. boss extending from the drill's base plate is inserted in the 3/16 in. hole in the engraving.

The sub-base used for mounting the color components on the 0.150 in. magnesium is a wood block to prevent undue wear on the drill. An 18 in. steel carpenter's square is mounted accurately on this wood block base. At the outset columns were scribed on the magnesium mounting dummies but this system has been discarded since the majority of color layouts disregard standard column dimensions. The color plates are simply mounted in position directly from an accurate layout supplied for each job.

The register pin when mounted in the dummy base is 0.004 in. below printing surface level and affords us a much larger and more accurate bearing than the commonly used nails for example. This is particularly important when rolling mats because by rolling, the small holes tend to elongate.

In addition, small plates of engraver's register marks are mounted in the original form at the extremities, where possible, and serve well in preregistering mats and plates. These register marks are mounted by the same technique as used with the register pins and can be easily removed when copy is carried in any one of the corners.

(*In Part VI will be covered the role played by the composing and stereo departments in the overall color picture.*)

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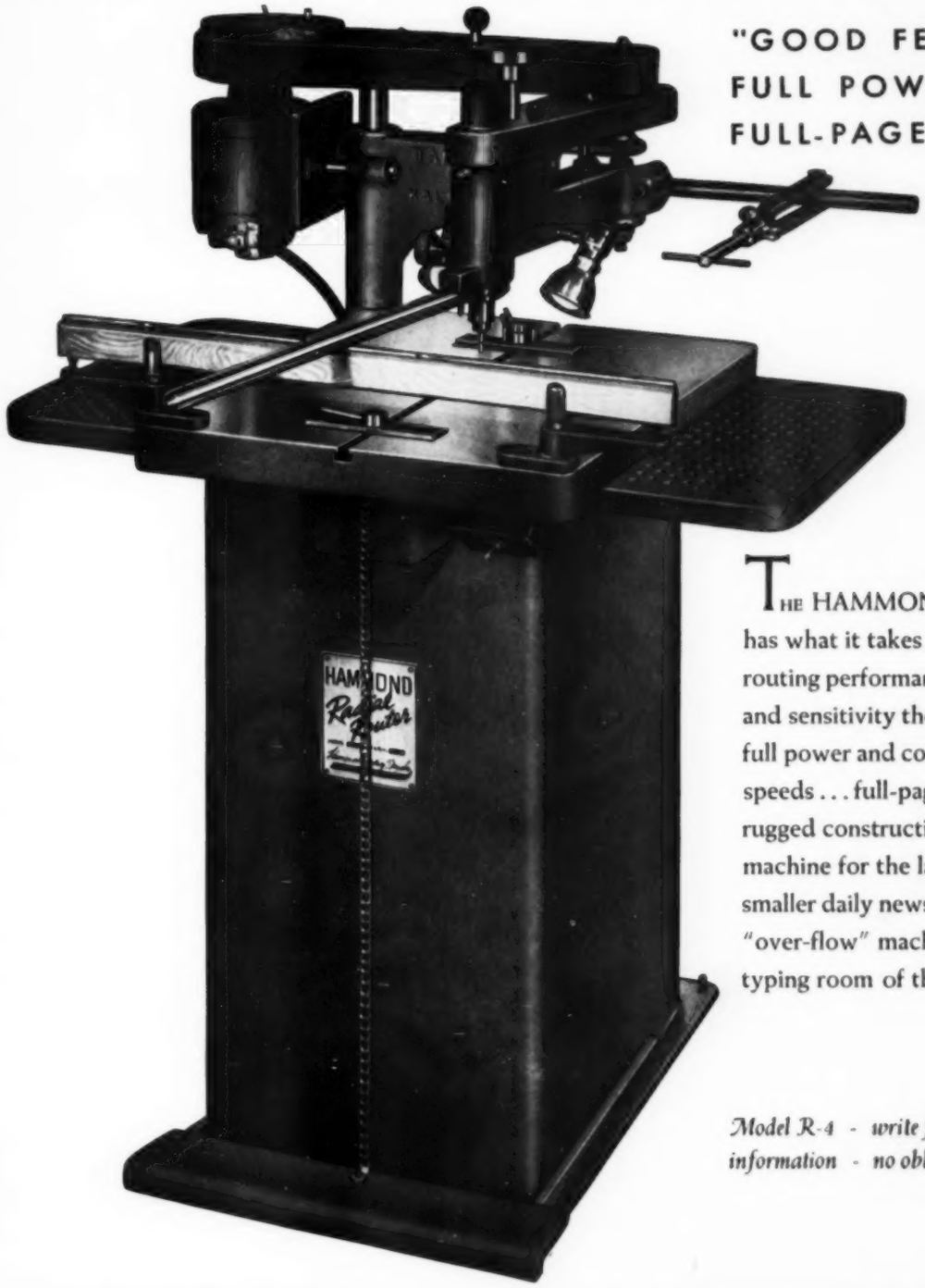

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